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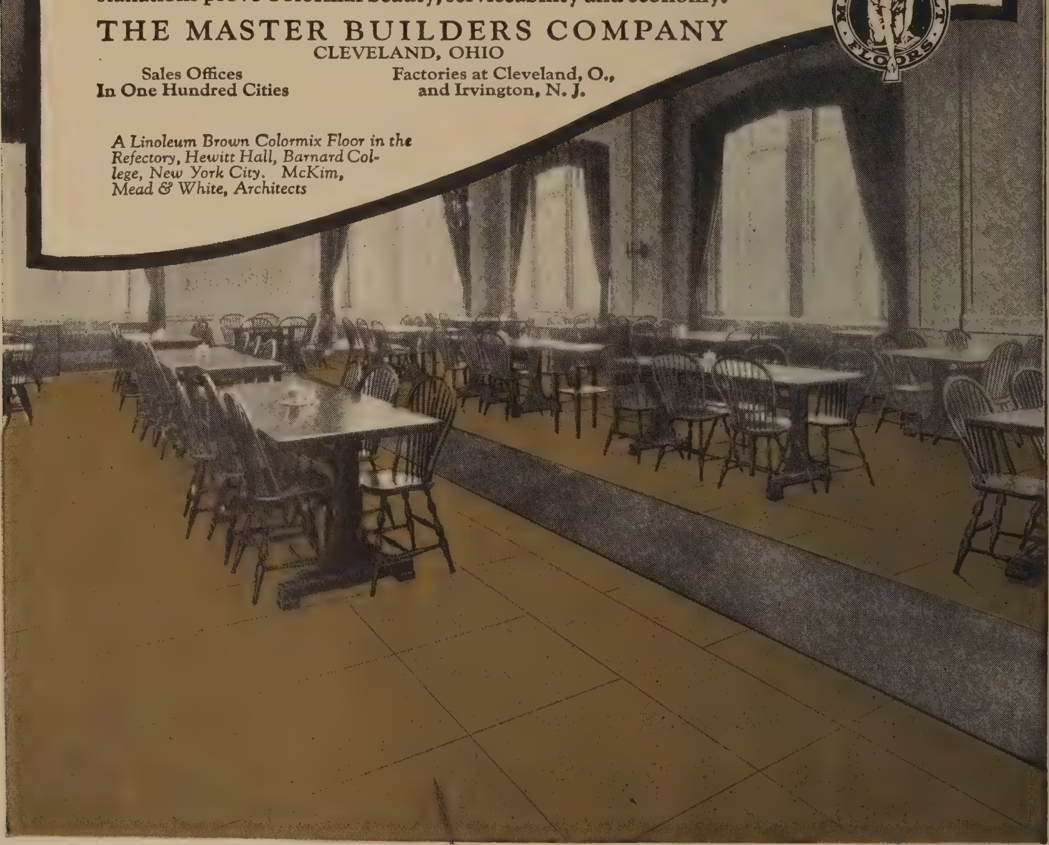

A Linoleum Brown Colormix Floor in the Refectory, Hewitt Hall, Barnard College, New York City. McKim, Mead & White, Architects

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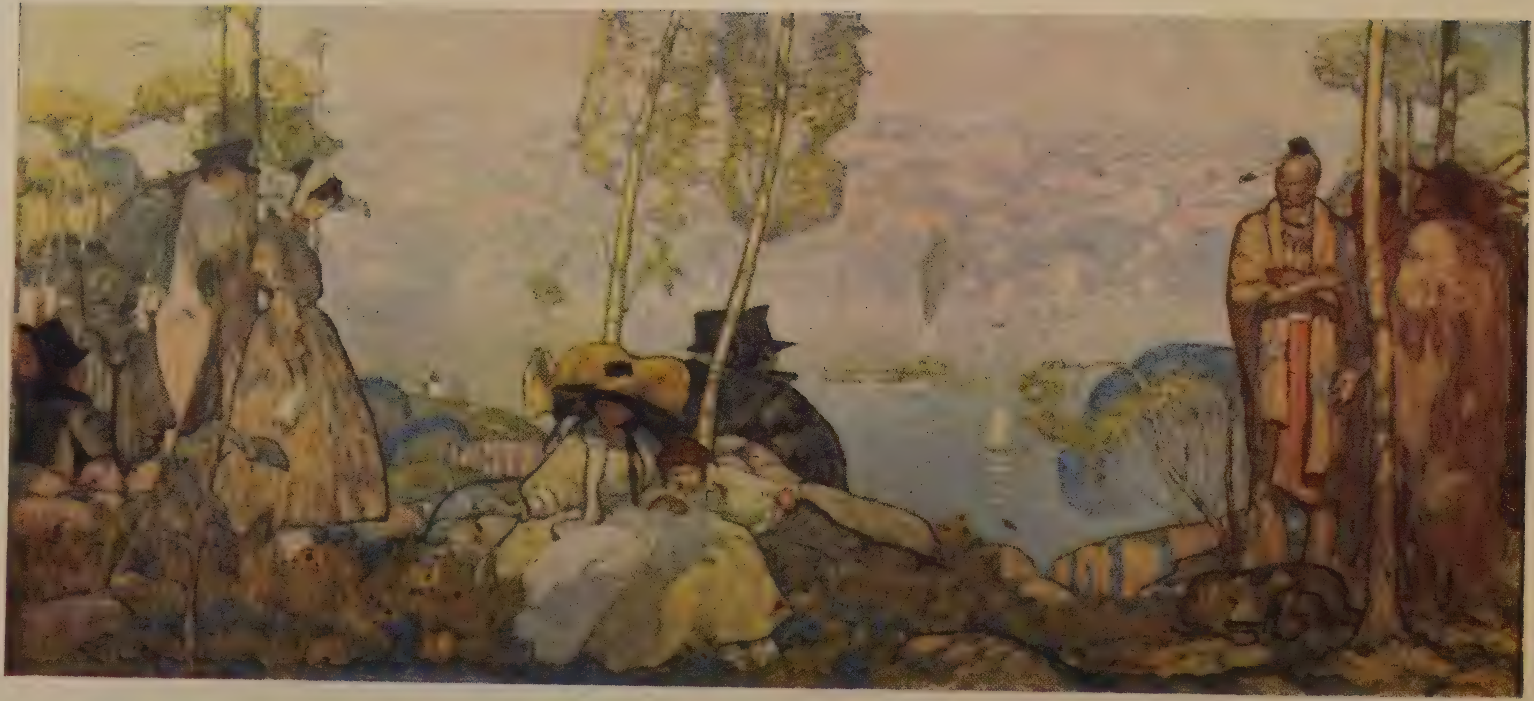

Mural Painting by Harvey Dunn.
Created for the Lord and Taylor Centennial.

The
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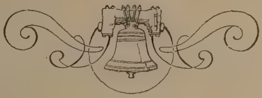
RECORD

VOLUME 60 JULY, 1926 NUMBER 1

The SESQUI-CENTENNIAL EXPOSITION, PHILADELPHIA



By

Frank W. Skinner, Consulting Engineer

This year the city of Philadelphia commemorates the 150th anniversary of the Declaration of Independence of the United States of America by an International Exposition, for which the grounds, buildings, equipment and improvements necessary for the display of exhibits and the comfort, instruction and entertainment of millions of visitors will probably reach a total cost of more than $10,000,000. In addition, great sums will be expended by public and private exhibitors and concessionaires during the six months from June 1st to December 1st that the exposition will be officially open. Provisions of public utilities have been based on an approximate attendance of 200,000 persons daily.

Temporary construction of the type usual in Expositions, while large in the aggregate, has received meager attention in architectural literature despite the fact that it brings problems and involves a technique of its own. This article is an authentic presentation of the characteristic problems in design and construction met with in Exposition architecture and the solutions adopted at the Philadelphia Sesqui-Centennial.—Editor.

The site of the exposition is in the southern part of the city of Philadelphia, adjacent to the U. S. Navy Yard at League Island, at the southern terminal of Broad Street which bisects the grounds. It covers about fifteen hundred acres of land that has been leveled to a height of three to fifteen feet above tide level, and includes about five hundred acres of the east and west League Island Parks, which had already been improved by the city with macadamized roads, trees, shrubs, lawns, lagoons, boat houses, pavilions and numerous other structures.

As all the highways, permanent park space, water supply, sewage systems, policing and some other important features are exclusively under municipal control and ownership, the participation of the city with the administrative staff of the exposition association is very close, and no attempt is here made to differentiate between municipal and association initiative and execution, all of which is under the direction of the expert administrative staff of the association, headed by its President, Mayor W. Freeland Kendrick, and his Director of Public Works, George H. Biles.

As the undertaking progressed it was found necessary to have some one appointed to co-ordinate all the branches of the work, such as excavation, filling, grading, water-ways, dikes, sewers, etc., and therefore Mr. R. J. Pearse was appointed Director of Works, under the direction of the Director of Public Works, Mr. George H. Biles, to co-operate with the Supervising Architect.

ARRANGEMENT

The Broad Street approach passes beneath a monumental replica in heroic dimensions of the famous Liberty Bell, and continuing between double rows of trees, enters the enclosed grounds at the upper level where a great court, the Forum of Founders, is formed with the two largest buildings, Liberal Arts and Agriculture, on one side and several important buildings on the opposite side at the north and south extremities of the ramp and cascade leading to the court of Formal Waterways, beyond which is the 80-acre Gladway area for amusement purposes.

On the east side, the other League Island Park has already been devoted to the permanent municipal Stadium, with a seating capacity of 100,000 which is enclosed by lawns and shrubbery and forms an essential part of the exposition equipment. The League Island Park is bordered by several tracks of trunk line railroads which afford between their margin and the Navy Yard an ideal location for the enormous Transportation building at track level, entered from the southerly terminal plaza on its upper level. The main buildings will afford about 1,500,000 square feet of exhibition space besides that provided by state buildings, private interests, and many foreign governments, about twenty of the latter being located in the West League Island Park section of the ground.

PRELIMINARY WORK

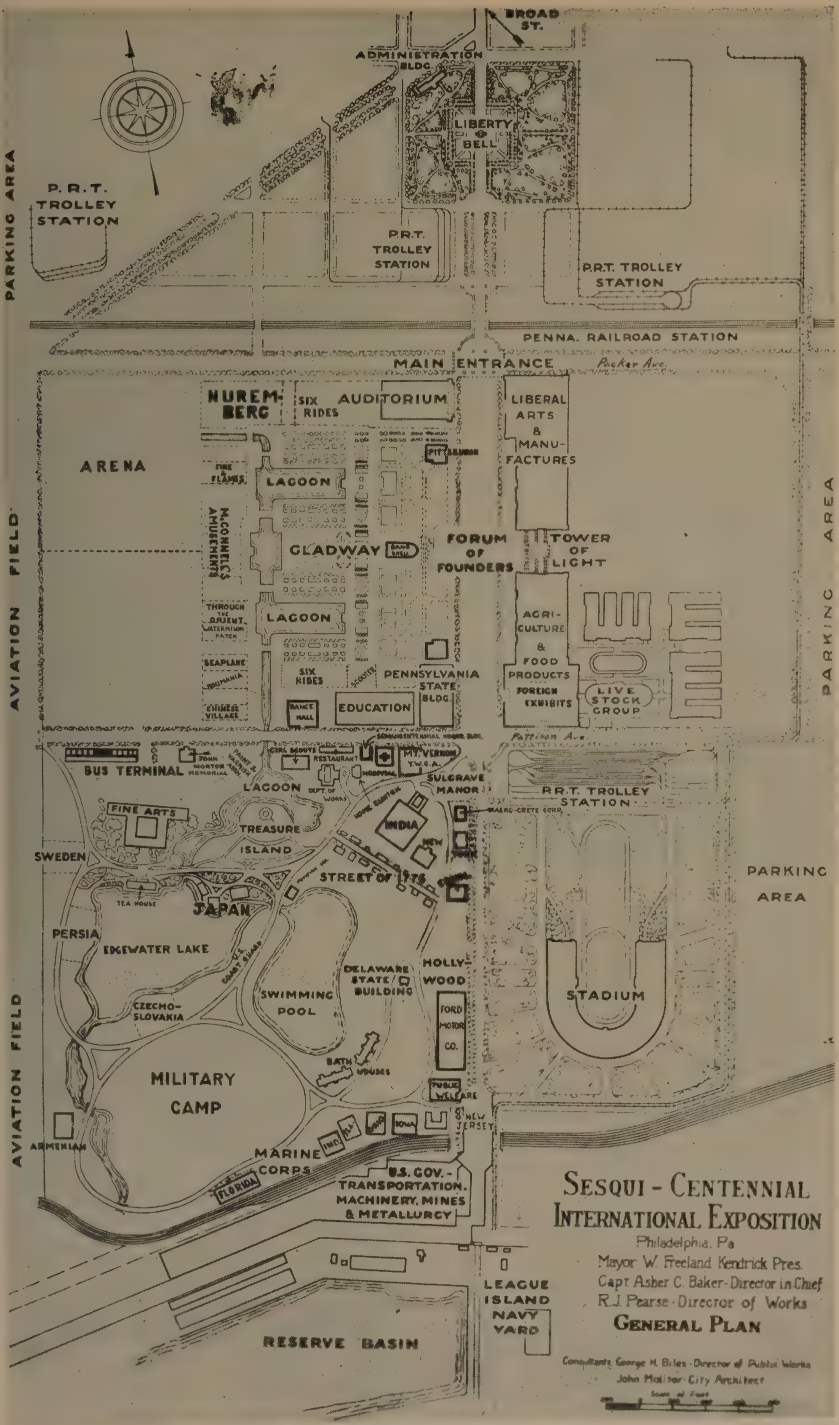
Among the first important operations of exposition construction were the improvements of the principal adjacent streets serving the exposition. These were executed under city contracts aggregating nearly half a million dollars for about 200,000 square yards of new or resurfaced pavement with eight-inch slag foundation, sheet asphalt wearing surface and granite pavement adjacent to car tracks. This work required an average cut of about eight inches in depth, made with two power graders and two steam shovels. The pavement was laid at an average of speed of about 4,000 yards a day by a force consisting of about three hundred men, thirty trucks and six steam rollers.

At the beginning of construction operations the leased portion of the site was a very low swampy area. Extensive grading operations were promptly commenced to level the surface with a fill of about 2,000,000 cubic yards, chiefly derived from the North Broad Street subway excavation and delivered by trucks to storage piles whence it was reclaimed by about fifteen caterpillar traction steam shovels, distributed wherever needed with a maximum haul not exceeding 2,500 feet, leveled by six-foot and eight-foot scraper blades on tractors and compacted by five-ton steam rollers. Only about 500,000 yards of excavation at the site was required for the grading.

Two eight-inch suction dredges and a clamshell dredge were also installed to excavate about 100,000 yards of material for the Gladway lagoons, about four feet deep, with a surface of about 40,000 square feet in addition to the 120,000 square feet of the previously existing lake and wading pools in the League Island Park.

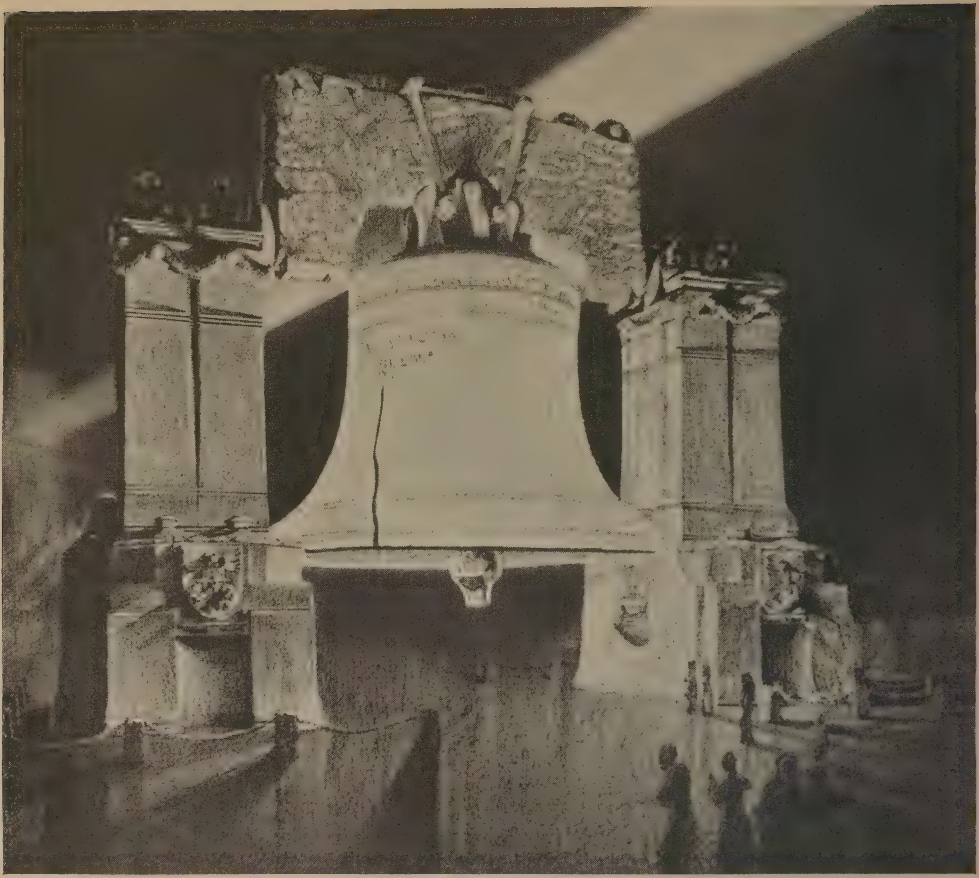
LANDSCAPE FEATURES

As there is no topographical diversity the landscape engineering necessarily emphasized tree planting, shrubbery, flow-



SESQUI - CENTENNIAL
INTERNATIONAL EXPOSITION
Philadelphia, Pa
Mayor W. Freeland Kendrick Pres.
Capt. Asher C. Baker-Director in Chief
R.J. Pearse-Director of Works
GENERAL PLAN

Consultants George H. Biles - Director of Public Works
John Molitor - City Architect



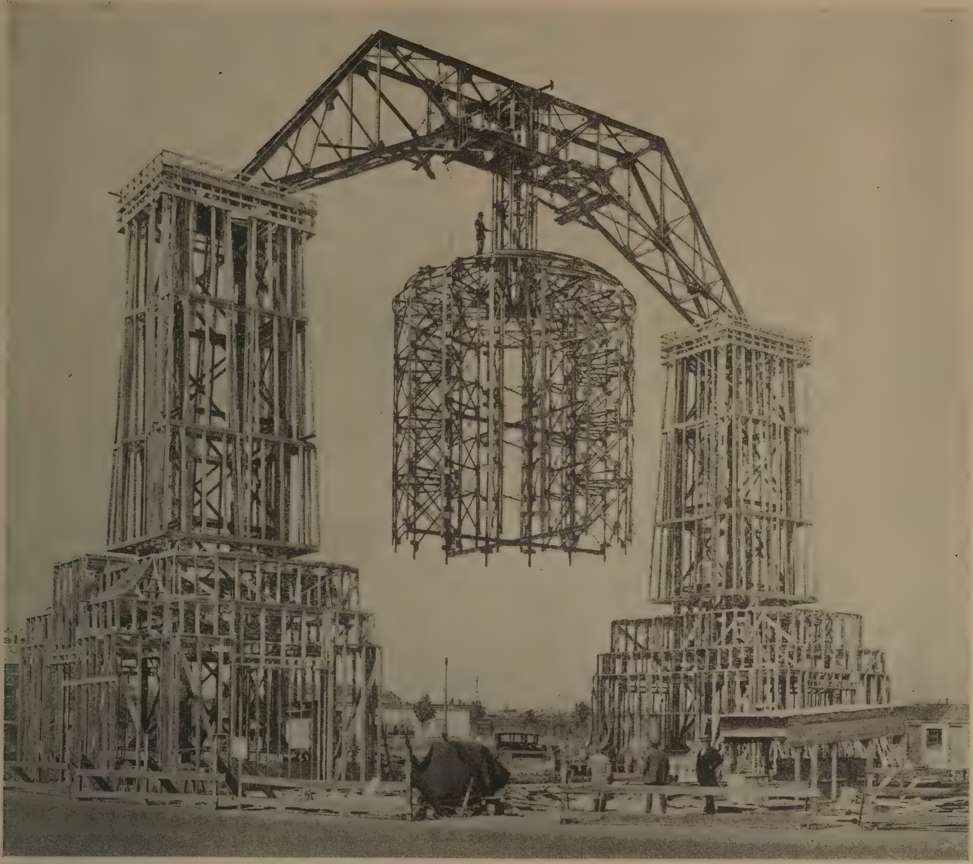
THE LIBERTY BELL
Erected at the entrance to the Sesqui-Centennial Exposition Grounds, Philadelphia

ers, statuary, water effects, foot walks and artificial lighting.

Broad Street, forming the main axis of the grounds, has been converted into The Forum of Founders, a mall 300 feet wide with avenues of five hundred European linden trees bordering its two seventy-foot center parkways and set in double rows on each side of the fifty-foot avenue between them, which is paved with asphalt and flanked with a twenty-foot pavement of the same on each side.

East of the mall, fronting the main exhibition palaces, are eight 65 x 130-foot sculpture gardens, planted with rhododendrons, evergreens, flowering trees and shrubs to form a setting for heroic examples of mythological and allegorical American sculpture. West of the mall the avenue has been given confinement and unity by an evergreen wall of 350 native red cedar trees, sixteen feet high, that form a background for the thirteen monumental columns of the Signers.

In the Forum of Founders, at the intersection of the mall with the transverse axis through the Tower of Light, are three great features of monumental statuary of heroic proportions. This grand court is enclosed by pine trees sixteen feet high faced with specimens of Japanese cedars. Near the Tower of Light there are two sculpture gardens with heroic statues of Washington and Franklin. On the opposite side of the Court are two fountains, thirty-two feet



THE LIBERTY BELL
Steel framework and wood furring for metal lath

high. Below the colonnade is the Gladway ramp, two hundred feet wide and three hundred and seventy-five feet long, surfaced with buff gravel.

At the foot of the Gladway ramp, are two 65 x 130-foot water gardens planted with many varieties of colored oriental water lilies that bloom day and night. The central feature of the Gladway is an electrical fountain and the illumination of the spray with colored lights. An additional feature is the 100 x 191-foot U-shape lagoon or water basin, with the legs three hundred feet apart in the clear. All of the banks are retained by wooden sheet piling surmounted by balustrades.

Owing to the probability of settlement in the recently filled grading it was deemed inadvisable to attempt any underground system of irrigation for the extensive lawns and planting, and it was decided to install various types of overhead and portable watering equipment.

LARGE BUILDINGS

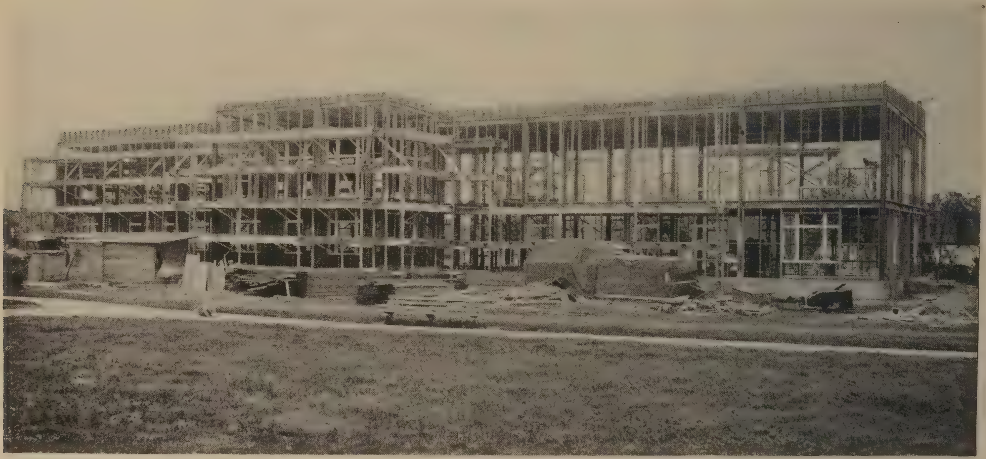
The scheme of arrangement of the Exposition Plan, grouping of buildings, locations, style and details of construction were formulated and developed in the office of the City Architect, John Molitor, who was appointed Supervising Architect for the Sesqui-Centennial Exposition Association.

The Supervising Architect designed the following large Exposition Buildings: The Administration Building; Palace of Liberal Arts, Building No. 1; Palace of

Agriculture and Food Products, Building No. 2; The Auditorium, Building No. 3; Palace of Transportation, Machinery, Mines, and Metallurgy, Building No. 5; Palace of Education, Building No. 8; Palace of Fine Arts, Building No. 9; The Tower of Light, Building No. 25; also Colonnades, Band Stands and many other minor features, including the thirteen columns commemorating the Signers of the Declaration of Independence. He was assisted by his staff, headed by Mr. William S. Covell and Mr. J. Horace Frank, assistant architects, Mr. Louis Kahn, architectural designer; Mr. De L. Dodge, colorist; and Mr. Giuseppe Donato, architectural sculptor.

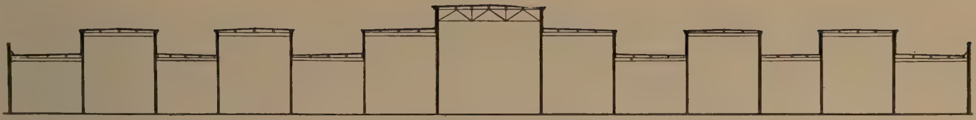
Types of Buildings

Besides the entrance Pylons, Tower of Light, Liberty Bell, the fountains and a large amount of heroic scultpure, the construction consists chiefly of temporary and permanent buildings. The most important of them is a group of six great temporary buildings for Agriculture, Liberal Arts, Machinery, Education, Fine Arts and Transportation, which cover an area of about 1,500,000 square feet, and cost about $4,000,000, an average of about $2.50 per square foot. This group of buildings, plus the Auditorium Building, contain about 9,200 tons of structural steel and have wooden framework in all roof and wall spaces. They form a special class of structures with steel skeleton, secondary wood framework, reticulated steel and plaster covering, wood and composition roofs and wallboard linings. This type has been adopted for the Pennsylvania State Building and some of the other more important structures. Besides these, there are eleven temporary state buildings, costing more than $2,000,000, ten other state buildings of unknown cost, the Taj Mahal, built by India at a cost of about $200,000, and other important stuccoed buildings built by Spain, Persia, China, Roumania, Cuba, Argentina, and other foreign countries; permanent buildings for the administration and for Egypt, Sweden and a great number of temporary structures, pavilions, booths, etc.

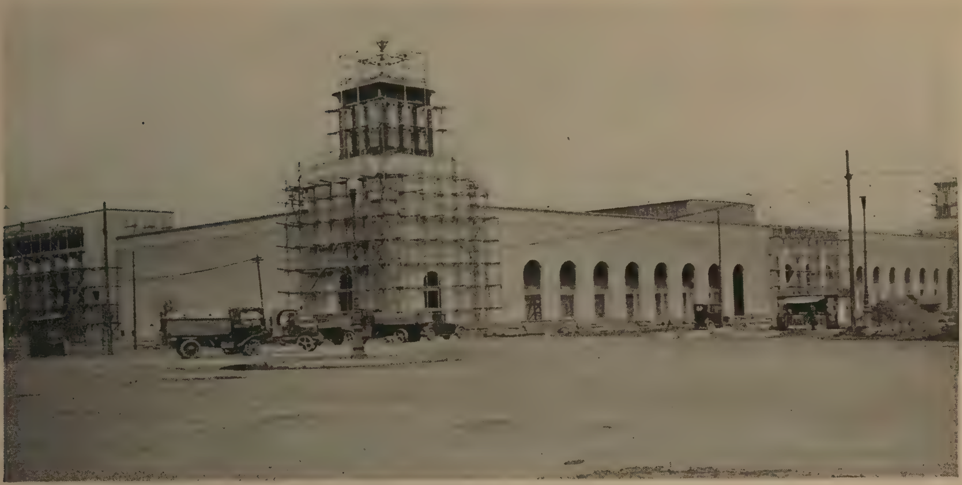


ERECTION OF ADMINISTRATION BUILDING
Sesqui-Centennial Exposition, Philadelphia

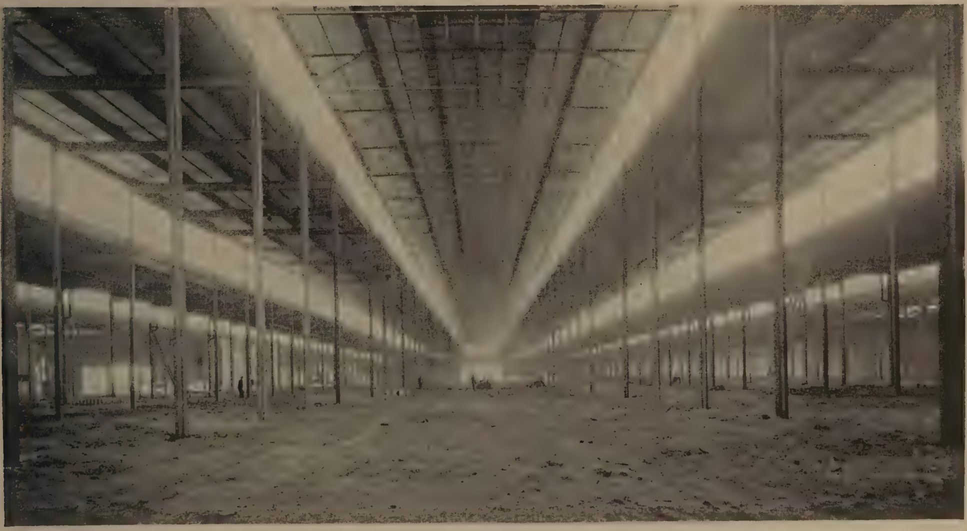
All buildings that require more support than is afforded by mud sills or spread footings have foundations of wooden piles arranged singly and in clusters of two or more, the number being determined by the resistance to penetration. There were in all about 5,000 wooden piles from fifteen to fifty feet in length and averaging thirty-five feet in length, that were driven with drop hammers, to three-foot penetration in hard stratum.



Cross Secion Through Building

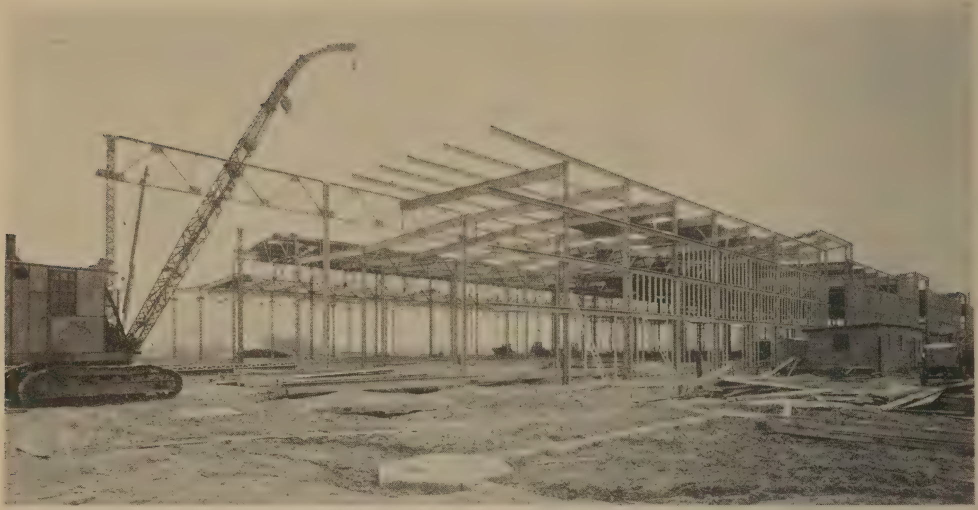


Exterior

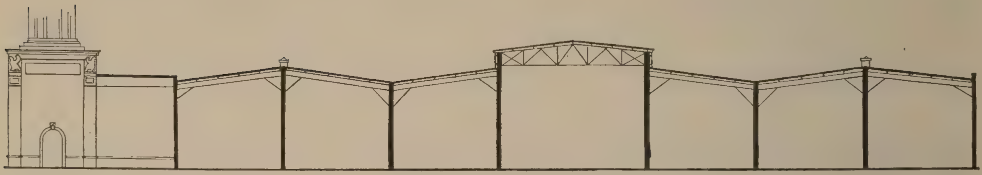


Interior

THE PALACE OF AGRICULTURE AND FOOD PRODUCTS
Sesqui-Centennial Exposition, Philadelphia



Erecting the
PALACE OF LIBERAL ARTS AND MANUFACTURES
With Caterpillar Mounted Whirley



Cross Section Through
PALACE OF LIBERAL ARTS

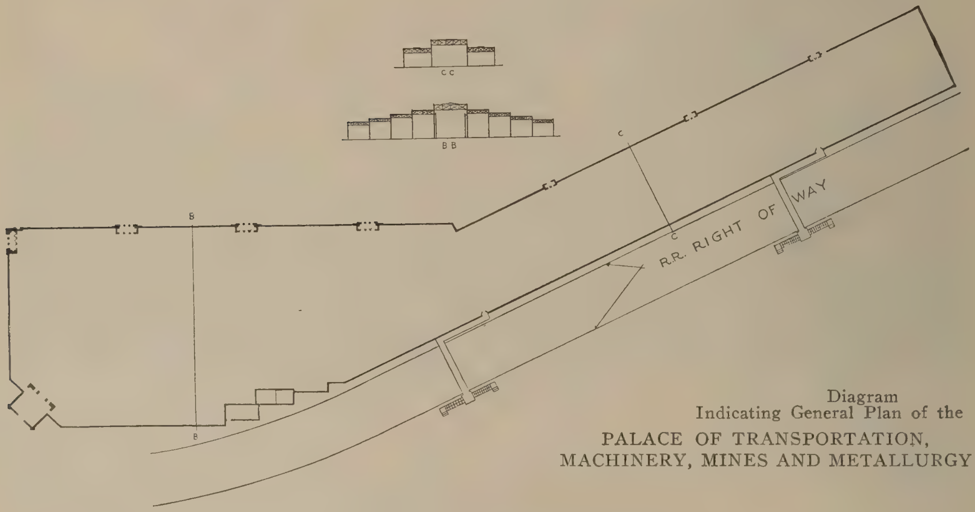
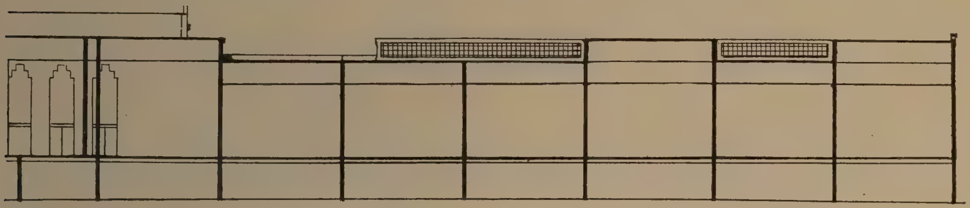


Diagram
Indicating General Plan of the
PALACE OF TRANSPORTATION,
MACHINERY, MINES AND METALLURGY

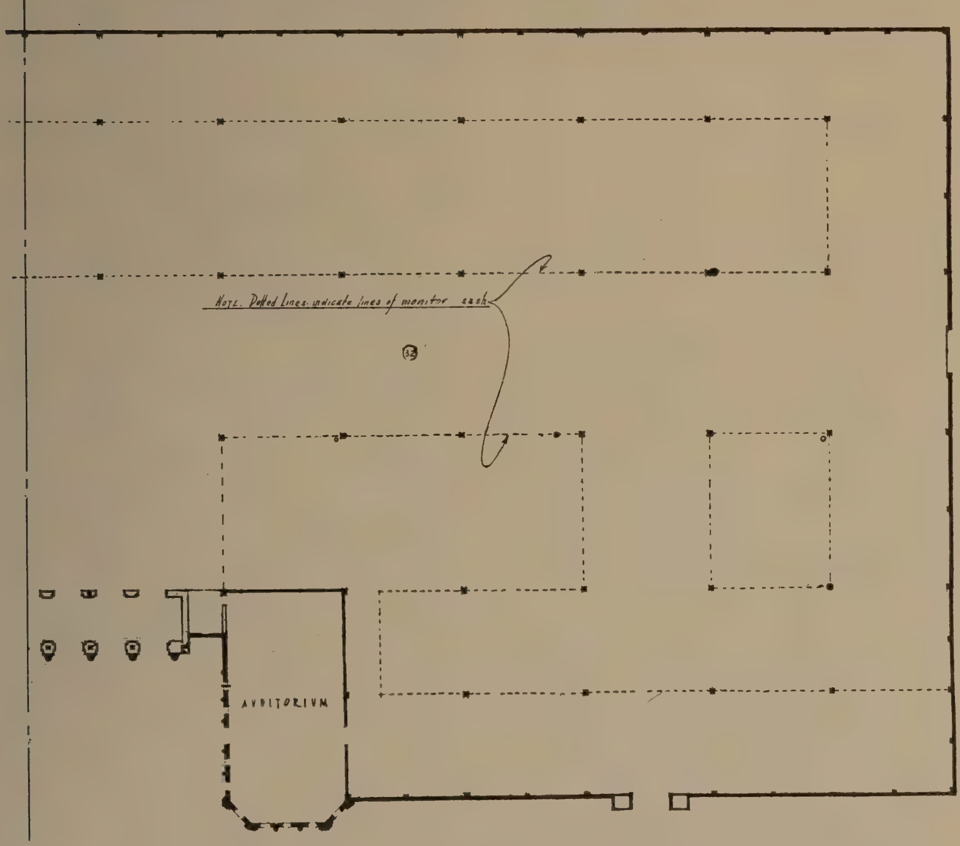
Sesqui-Centennial Exposition, Philadelphia

Enough of them were provided to reduce their loads to twenty tons per pile, as computed by the Wellington formula. The piles have concrete caps and grade beams that receive the pedestals of steel columns and the wooden sills of the wall construction.

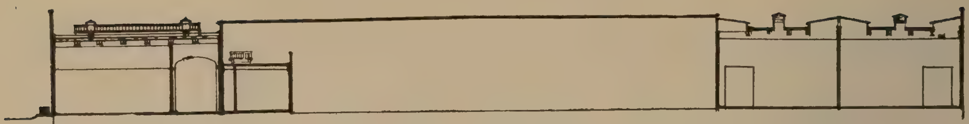
The steel skeletons are all of standard light factory construction, erected in most cases by locomotive cranes or their equivalent, and having all the field connections bolted instead of riveted. All the structural steel work is exposed. The wooden roofs are covered with two to



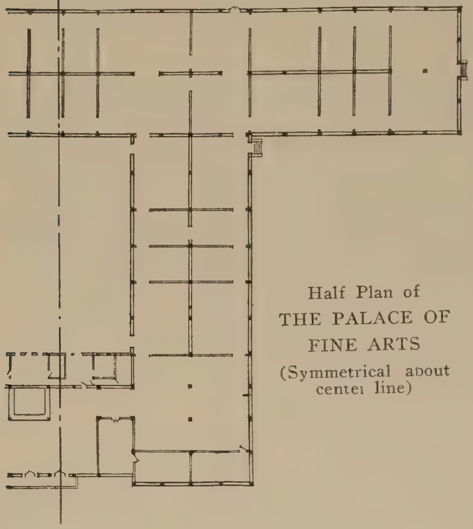
LONGITUDINAL SECTION



Half of Floor Plan (Symmetrical About Center Line) of
THE PALACE OF EDUCATION
Sesqui-Centennial Exposition, Philadelphia



Cross Section Through
PALACE OF FINE ARTS



Half Plan of
THE PALACE OF
FINE ARTS
(Symmetrical about
center line)

four-ply composition and are lighted either by monitor or inclined flat skylights covering about 25 per cent of the roof areas.

Between the steel columns there is a wooden framework with vertical 2″ x 4″ studs, sixteen inches apart, with metal laths weighing 3.4 pounds per square yard covered with two coats of cement mortar-stucco applied by hand with trowels and carefully finished to a maximum irregularity of surface. The last coat is colored with integral pigments that give a contasting rainbow effect in which salmon pink predominates, shading to pink and yellow.

The entrances doors are of 2¼-inch thick white pine or cypress. The large sash and window frames are generally of steel, and the ventilating panels in monitor and clerestories are electrically controlled.

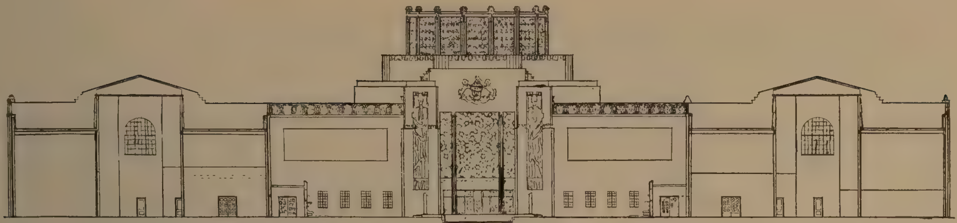
Wooden cornices and other exterior trim are painted with two coats of white lead, properly tinted, and in some cases the structural steel had one shop coat and one field coat of iron oxide paint. In other cases the steel has two coats of cold water paint similar to that applied to the interior wall and roof boards. Most of the large floors are directly supported on the filled ground, which is thoroughly trimmed and rolled to a smooth surface and covered with eight inches of cinder concrete and a one-inch cement surface.

The second class of temporary buildings includes most of the others designed for exhibits and many of the state buildings and buildings erected for the concessionaires. They differ from the first class chiefly in that the skeletons are entirely of wood and have more architectural embellishment and ornate construction. The ornamental work, statuary and sculptured detail, when of large size, are all built on wooden frames and are treated to resist weather. Most of the roofs are guaranteed for two years.

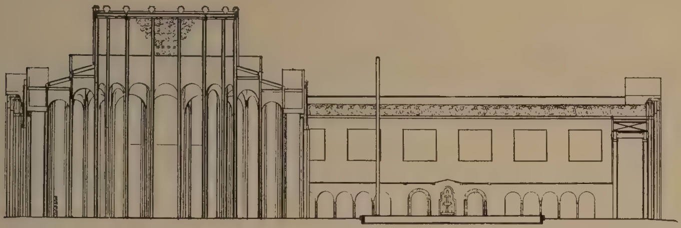
The large buildings have very little architectural embellishment, their artistic effect depending largely on the imposing magnitude of their dimensions, tower and dome effects, large entrances and special color treatment at these points. The types and details have been developed to insure simplicity of construction, standard low priced material, ordinary workmanship, maximum speed and economy of construction, and harmonious general effects, coordinated with a rich and brilliant color scheme, and a durability sufficient for the services of the exposition without providing for undue longevity at increased cost. Equipment has been measured by the essentials of safety, comfort and convenience. All buildings are supplied with electricity, water and drainage and some have steam and gas.

Official Buildings

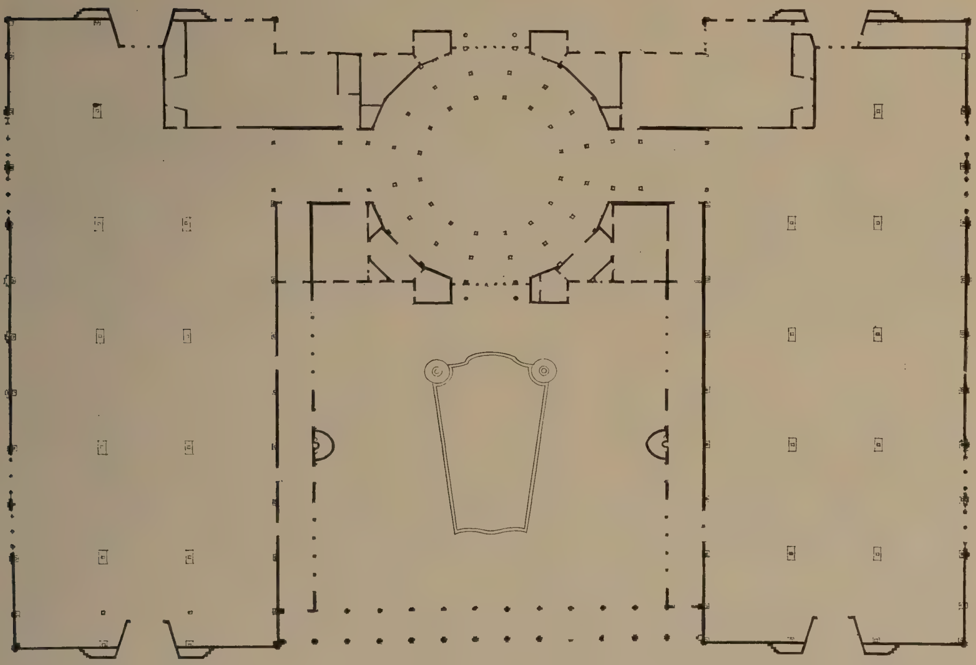
The largest of the exhibit buildings is the Palace of Agriculture and Food Products, nine hundred and seventy feet long, four hundred and sixty feet wide and thirty-five feet high, with a fifty-foot center longitudinal aisle and twelve



Section Through Court—Looking Toward Rotunda Entrance

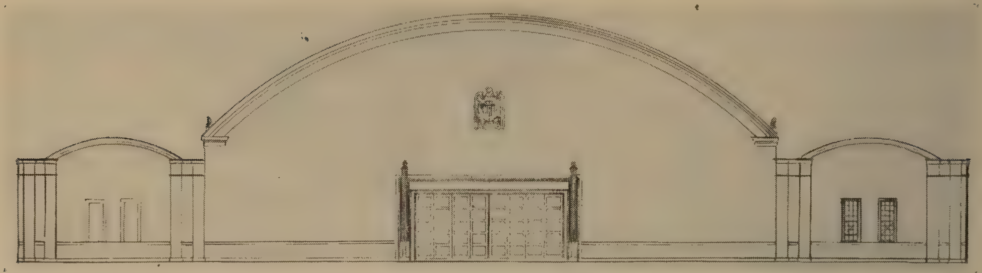


Section Through Center of Building



July, 1926

Floor Plan
THE PENNSYLVANIA STATE BUILDING
Ralph B. Bencker, Architect
Sesqui-Centennial Exposition, Philadelphia

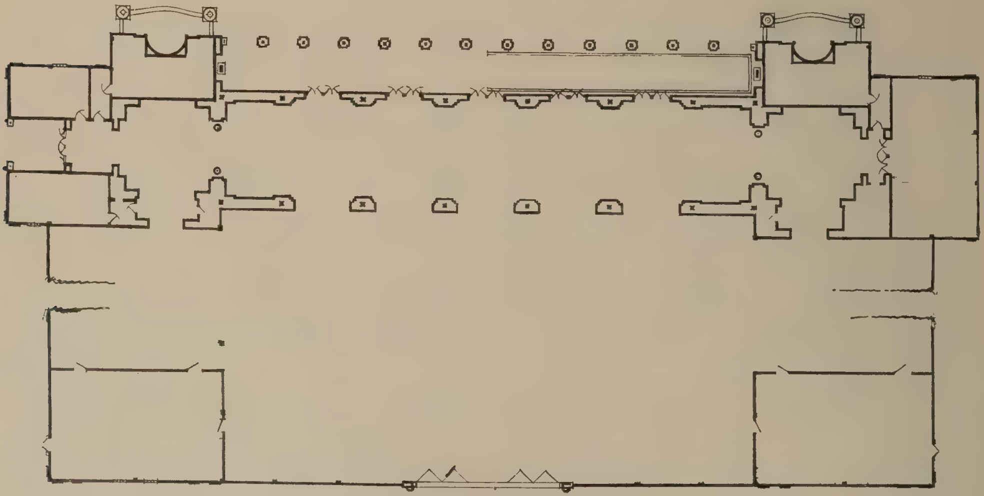


West Elevation of Auditorium

parallel side aisles thirty-four and thirty-five feet wide. The side aisles have alternately high level and low level roofs providing for twelve lines of clerestory illumination. The total cost was $949,000.

The Palace of Liberal Arts and Manufactures is of similar design, nine hundred and seventy feet long, and three hundred and ninety-two feet wide, covering an area of seven and three-quarter acres and costing $931,000. It has a sixty-foot centre aisle with clerestory windows and forty-four-foot side aisles with flat skylights having an area of 40,000 square feet. In the roof there are thirty-four and thirty-six inch ventilators.

The Palace of Transportation, Machinery, Mines and Metallurgy was originally designed to cover 489,000 square feet and costs $907,000. The main part, somewhat irregular in plan, is four hundred feet wide and eight hundred and eighty feet long with a sixty-four foot center aisle and eight parallel forty-two foot side aisles with a height increasing from twenty-eight feet at the exterior to fifty-six feet in the clear at the center, thus affording illumination through eight lines of clerestory windows with steel sash. The train shed extension has been superseded by platforms with umbrella roofs. Except for the stuccoed entrances the exterior walls are covered with painted asbestos board. The entrance tower is surmounted by a steel-frame dome covered with steel lath, plastered and guaranteed watertight for five years. The building is equipped with a fifty-ton girder crane of sixty-four foot span traveling on a track three hundred and

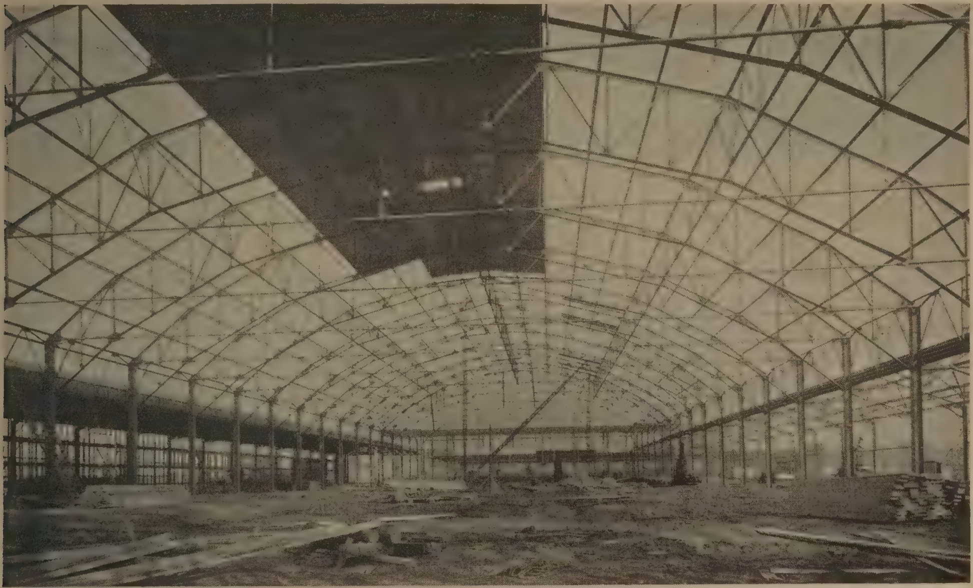


Plan of Auditorium
Sesqui-Centennial Exposition, Philadelphia

forty feet long, and also has a locomotive turntable one hundred and sixteen feet in diameter.

The Palace of Education is five hundred and twenty-four feet long, two hundred and eight feet wide, has an area of 109,000 square feet and its general consruction cost $348,000. It has four main longitudinal aisles forty-four, forty-two and twenty-four feet wide and is illuminated by exterior windows and monitor skylights. The 16 x 92-foot entrance portal is flanked by a chapel and by an auditorium with three hundred seats. There is a basement provided with toilet rooms and lockers for the public and for the Sesqui-Centennial guard and police. The main floor is carried by the steel columns.

The main portion of the Palace of Fine Arts is built around the 120 x 120-foot center court and is about two hundred and fifty-six feet square with two wings extending its front to a length of four hundred and ninety-six feet. The steel columns are generally spaced from seventeen to thirty-four feet apart and there are no windows except for offices and toilet rooms. Illumination is through flat angle skylights covering 60 per cent of the roof. Ventilation is provided by one hundred and thirty rotary ball-bearing ventilators twenty-four inches in diameter. The exhibition corridors are divided into numerous galleries by plaster board partitions sixteen-feet high, nailed to wooden studs. Gallery ceilings are all provided with horizontal diffusing cheesecloth screens under the skylights. The cloth is tacked to 4 x 11 inch wooden strips supported on ⅜-inch steel rods three-feet apart. The roof consists of gypsum slabs haunched to the lower flanges of the I-beams, and reinforced by galvanized steel wires carried over the tops of the beams as in the Metropolitan type. The slabs are proportioned to carry the dead load and forty-pound live load per square foot with a factor of safety of four. Total cost is about $270,000.



Auditorium Steel Work Erected by Steel Guyed Derrick

The 426x250-foot Auditorium has an area of about 105,000 square feet, and cost $446,000. The Main Hall has a 150x400-foot auditorium flanked by two fifty-foot parallel aisles, all of them

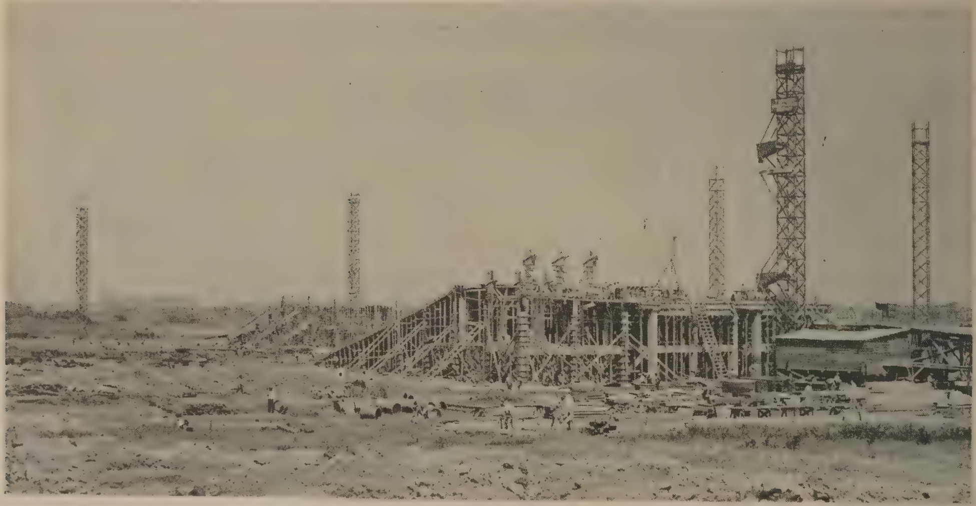
Nearly Completed Section
THE PHILADELPHIA MUNICIPAL STADIUM

being free from obstruction by columns.

The nave is spanned with steel arch trusses having a total height of more than sixty feet and supported on steel columns twenty feet apart longitudinally. The walls are of stucco and the building is equipped with steam heating system. A 50x100-foot stage has a large organ, and a radio broadcasting apparatus with amplifiers serves the more distant parts of the building.

Pennsylvania State Building

Conspicuous among the greater buildings designed by special architects is the unique and beautiful $450,000 Pennsylvania State Building, permanently located at one corner of the Forum of Founders, and designed by architect Ralph B. Bencker with rich coloring, ornate architecture, lavish illumination and heroic statuary to symbolize the glory, wealth and history of the Commonwealth of

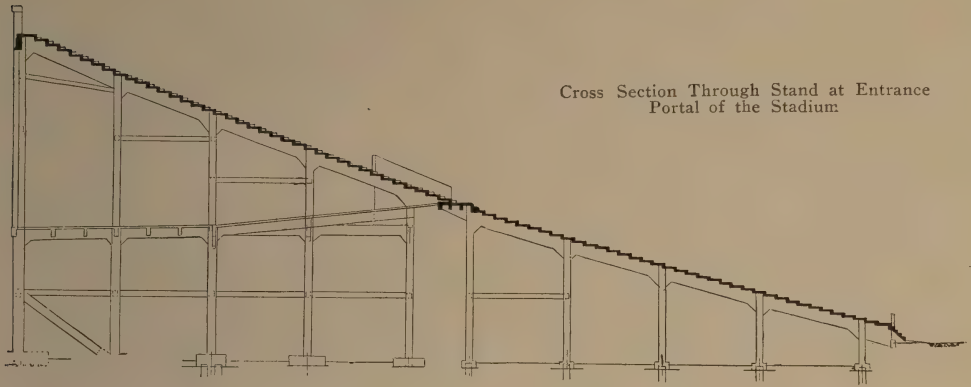


Hoisting Towers and Aerial Systems for Distributing Concrete for the Stadium

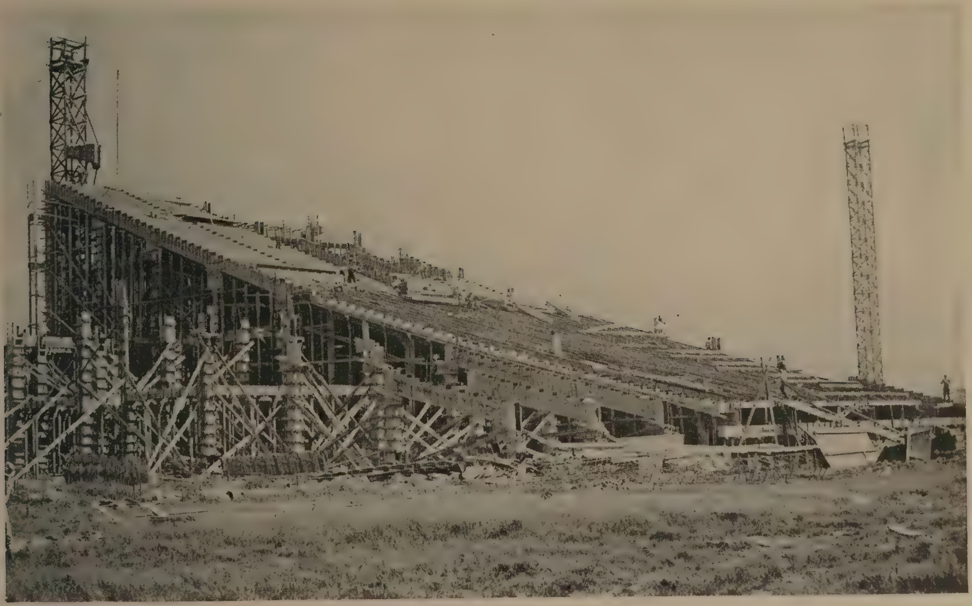
Pennsylvania. The U-shape plan three hundred and thirty feet wide, and two hundred and twenty-five feet deep, encloses three sides of an open court one hundred and twenty feet square. The building has a general height of forty-three feet with a central tower seventy-five feet high whose steel framework is covered with plaster.

The great exhibition hall is lighted through monitor skylights, and the rotunda has a perforated concrete clerestory grill glazed with vari-colored glass. In the great niches of the front wall are heroic groups of sculpture representing Industry and Agriculture, and in the walls around the court are fourteen panels containing heroic bas-relief scenes from the history of the state, which together with the architectural embellishment are reflected in the large shallow concrete pool in the center of the court yard.

The exterior walls are trowelled stucco one-inch thick, applied in three coats and colored by spray. The stucco was applied to expanded metal lath on two



Cross Section Through Stand at Entrance Portal of the Stadium



Construction of Stadium Deck

inch by twenty-six inch vertical studs, twenty-four inches apart, which were fastened to ten-inch horizontal channel girths. All of the columns are ten-inch H-beams except those seventy-five feet high that support the rotunda dome and that were designed at first to be made with twelve-inch steel pipe having joints shop-welded to inside sleeves and fitted with screwed flange bearings at the tops for supporting the beams.

In the clerestory, above the main roof, are 8x14-foot panels of reinforced concrete grills made up in 2x3-foot units, whose precast channel shape diagonals were assembled on a horizontal plane and filled with reinforcement rods wrapped in burlap, soaked in grout and forming together a half sash on which the glass was placed and secured by superimposing the corresponding upper half sash, which being cemented to the lower half, completed the unit. The parapets and the grills in the rotunda entrances are of similar character, but of different design.

The rotunda has a sixteen sided flat plastered roof fifty-feet in diameter which is just above the perforated exterior grill fourteen-feet high. A few feet below this grill the rotunda walls are enclosed by concentric inclined skylights beneath which there is a horizontal diffusing sash glazed with colored glass. Above the skylight reflectors illuminate the top of the rotunda tower and throw the light down through the skylight on the leaded glass. This type of illumination is repeated between the center and outer row of columns where the intermediate parapet changes from sixteen-sided to eight-sided at the main roof level, and the projecting angles are carried on wooden cantilevers fulcrumed on the intermediate columns.

Permanent Structures

Most important of all the permanent structures is the great Municipal Stadium which has just been completed by the City of Philadelphia, at a cost of over $2,000,000. It consists essentially of a vast reinforced concrete horseshoe seven hundred and twenty-one feet long by seven hundred and ten feet wide with a convex periphery of 1,852 feet.

The inclined open deck with seats for 100,000 spectators has a width of about one hundred and eighty feet and slopes up to a height of sixty-five feet above the level of the playing field. It is supported on ten concentric rows of concrete columns braced by three tiers of horizontal struts. Expansion and contraction of the great mass is amply provided for by its division into uniform 46x96-foot units of area bounded on all sides by cantilevered construction expansion joints.

Enormous quantities of materials were involved in the construction which required 30,000 yards of grading and filling, 7,000 yards of excavation 42,000 concrete foundation piles, 1,500 tons of reinforcement steel and 23,000 yards of concrete mixed in four plants and distributed by an aerial cable way system supported on six towers. Simon & Simon are the architects.

The permanent 40x200-foot Administration Building two stories high is of an ordinary office building type wtih colonial façades and cost about $70,000.

There are, in all, about forty-five major buildings, exclusive of those on High Street, and Treasure Island and the Gladway structures, besides which there are two hundred and fifty booths and stands distributed over the grounds. The states of Florida, New York, New Jersey, Illinois, Ohio, Oklahoma and Iowa will have buildings costing from $100,000 to $500,000 each, and the states of Delaware, California, Texas, Kansas, Washington, Oregon, Idaho, Vermont, Mississippi, and others will have less imposing structures.

Tower of Light

The loftiest exposition structure is the steel-frame Tower of Light, about one hundred and seventy-five feet high. It is a twelve-sided structure with twenty-four inclined main columns each made with a pair of angles, above which the framework is extended about twenty-nine feet higher by twelve vertical columns carrying the uppermost or searchlight floor. The tower is braced by thirteen stories of horizontal and diagonal struts.

Like the buildings, the tower is enclosed by stucco and wire lath and is supported on wooden piles which have an average length of thirty feet. On the top floor there is installed one of the largest searchlights in the world, with a 3,000,000,000 candle power searchlight sixty-two inches in diameter that weighs about 5,000 pounds.

DRAINAGE, PLUMBING AND WATER SUPPLY

The plumbing of the various buildings and comfort stations and the disposal of storm water drainage was computed, laid out and arranged by the Supervising Architect and his assistant Mr. W. J. Sutphen, Chief of the Sanitary Division.

The storm-water drainage of the exposition grounds is entirely delivered to the lagoons. There is a complete sanitary drainage system based on a maximum flow of about one and a half million gallons daily that flows to two pumping stations where it is elevated about twenty-five feet by automatic electric centrifugal pumps, each of five hundred g. p. m. capacity, which deliver through one thousand feet of ten-inch steel mains to existing city sewers.

The sewer pipes, as well as the water and gas mains, are laid in trenches of a maximum depth of twenty-five feet, most of which were excavated by four power machines of the bucket and revolving wheel types.

The domestic water supply estimated at about one and a quarter million gallons daily is derived from many connections to the existing city mains and is delivered through cast iron pipes exterior to the buildings and through screwed interior pipes.

All of the regular water supply is filtered and one of the exhibitors has installed a commercial refrigerating plant of fifty-tons capacity to furnish all the ice required on the grounds. Installed on the grounds are about a hundred drinking fountains supplied with water cooled by automatic electric refrigeration.

ELECTRICITY

The lighting of the grounds and exposition areas, the illumination of the buildings both as to exterior and interior treatments, and the lighting effects of the Tower and of the Liberty Bell, were arranged under the direction of the Director of Works Mr. R. J. Pearse, assisted by Mr. L. C. Darrin, Chief of the Electrical Division, and by Mr. D. C. Atwater of the Westinghouse Lamp Co.

Commercial sources supply 12,500 K. V. A. of alternating 60-cycle three-phase 13,200 volt electric current which is reduced at transformer banks to 230-volt two-phase for lighting, and three-phase for power purposes.

The entire surface of the Tower of Light is illuminated by lamps of various colors, and the searchlight which surmounts it has three billion candle power. In the Gladway there is electric illumination for the fountains, and there are twenty searchlights, each of 1,600,000 candle power mounted on trucks. There are also here one hundred and nineteen 600-candle power lamps on ornamental posts twelve feet high. The lagoons are lighted from shore and the large buildings have flood lights of 500,000 candle power each, besides large quantities of 1,000-watt units suspended about thirty-five feet above the floor, three hundred and ten being required in building No. 1, and three hundred in No. 2. All the large buildings are illuminated to an intensity of about eight foot-candles.

In the city plaza fronting the main entrance to the exposition grounds, Broad Street is spanned by an eighty-ton steel structure 80-feet high, which consists of a pair of rectangular towers supporting a truss from which there is suspended a fabricated steel framework forming the skeleton on which there has been built up a replica 50 feet in diameter of the historic Liberty Bell in Independence Hall, Philadelphia.

The bell will be studded with 26,000 fifteen-watt incandescent lamps of amber shade, the rim of the bell being provided with white lamps to produce the high lights.

All the grounds are brilliantly illuminated by 500 and 1,000-watt flood lights concealed behind shrubbery and generally provided with clear glass globes. All electric cables are of the lead or parkway type and are buried. The larger buildings have several transformer banks.

The PHYSIOTHERAPY DEPARTMENT OF THE AMERICAN HOSPITAL

By

Edward F Stevens

More and more every year it is becoming to be recognized that many diseases and ailments hitherto considered surgical or neglected altogether can now be alleviated without surgery and with little medicine, by means which are called "treatments." The so-called "bath" departments of European hospitals include not only baths of water, steam, hot air, electric light, gas (CO_2), mud or peat, sand, etc., but sun baths, ultra-violet ray treatments, X-ray treatments, many forms of mechano-therapy, inhaling and pneumatic chambers, etc. These have been gradually introduced into this country, and today the careful student of hospital architecture will not dare to plan his buildings without providing facilities for these medical treatments which have come to be grouped under the term "physiotherapy."

It is not always necessary to provide an expensive outfit for all the elaborate processes of hydro-therapy; but room can be secured in almost every hospital for a small equipment—an electric light baker, a massage table, a small bath cabinet, simple, sometimes home-made devices. When these are provided, the progressive medical man or orthopedic surgeon will be pleased; a few years from now he will demand them.

Heat is an important therapeutic agent, whether it is applied as warm air, steam, electric light, or natural sunlight; scientifically applied, it is a recognized medium for benefiting man's ills.

The airing balcony provides sunlight for the medical as well as for the surgical patient. The simplest, and many times the most potent agency, *sunlight,* can easily be provided in every institution.

In designing a new hospital there should be set apart certain rooms to be reserved for physiotherapy, and equipped with proper electric and water outlets. Some of the best authorities recommend the following:

Ample outlets for *electro-therapy.*

For *hydro-therapy,* the douche may be omitted, but there should be one or more cabinet baths, of hot air or electric light or steam; usually a sitz bath; one or more tubs for continuous baths; tables for packs and for massage; a tank for fomentations, with wringer; and an accurate scale with measuring rod.

Apparatus for the application of *dry heat;* one light on an adjustable stand, and a small baker. These do not need special outlets, merely additional ones.

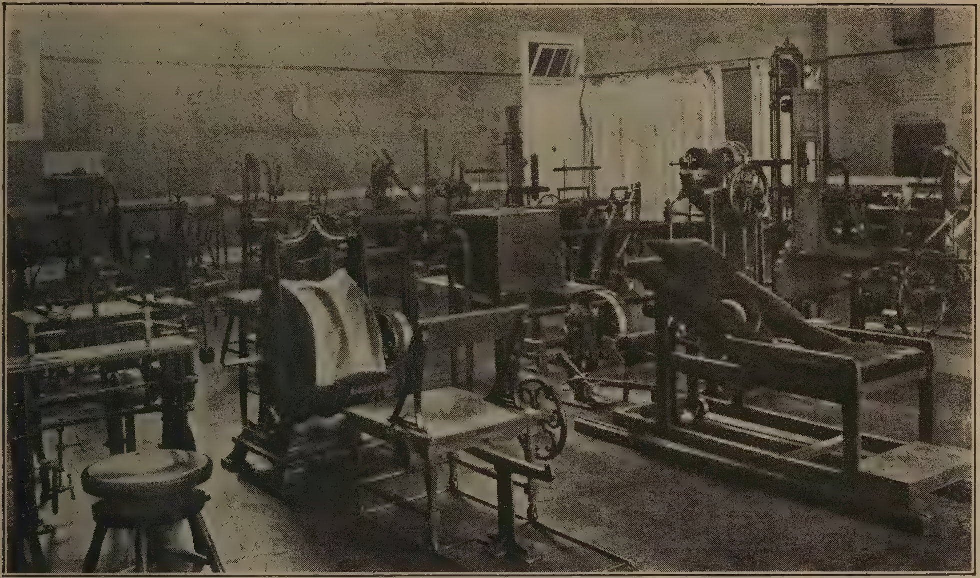
Outlets for *light-therapy* should be provided, since very many institutions are now using the "alpine" or "quartz" lamp, which produce the ultra-violet rays, i.e., artificial sunshine. [See Page 24.]

Mechano-therapy is advocated only if specially required and under a director, who will decide what installation is needed.

If portable apparatus is to be used in the wards, there should be convenient attachments provided for it.

The help given by scientific treatment to the so-called chronic invalids in some of the medical departments of the newer hospitals is referred to as little short of the miraculous.

In the Munich-Schwabing Hospital, Munich, Germany, the plan shown on page 20 contains rooms for X-ray therapy, inhalation room, pneumatic chambers (for rarefied or compressed air); for mud, peat and sand baths; for CO_2 and electric light baths, etc. There is a large hydro-therapeutic department, with sprays, douches, plunges, and continuous bath or water bed used in mania, extensive



ZANDER ROOM, MASSACHUSETTS GENERAL HOSPITAL, BOSTON, MASS.

burns, and some skin diseases. On the second floor is a large sun room, with a "water curtain" for reducing the temperature.

There are few hospitals in the world which have a more complete mechanotherapy equipment than the Massachusetts General Hospital, Boston, with its splendid Zander room, a photograph of which is reproduced above. The service is largely surgical.

In the *St. Luke's Hospital* (page 21) at Jacksonville, about one-half of the second story of the administration building was set apart for medical treatment. This portion was not equipped, but was ready whenever the demand came and the funds necessary to equip it and maintain it were obtained.

In the *Ross Private Pavilion* of the *Royal Victoria Hospital* (page 22) a large section is set apart and equipped for medical treatment, consisting of a small psychopathic department, Roentgen-ray department, hydro-therapy, electric Nauheim, and continuous baths, rest and massage rooms.

The medical treatment department of the *Ottawa Civic Hospital,* Ottawa, Canada, the plan of which is reproduced on page 21, though not elaborate, is fairly complete. It has rooms for special tub baths, showers, sprays and douches, packs, massage, etc. There are comfortable rest and dressing rooms.

In the *Cook County,* Chicago, *Psychopathic* building (page 20) there is a good hydro-therapeutic department, with arrangements for continuous baths, packs, etc. Rest rooms are provided. There is also a room for surgical dressings here.

The Southern Pacific and the San Francisco County Hospitals, both at San Francisco, not only have very complete physiotherapy equipment but are using it constantly with the best results. (Plan on page 22.)

The Department of Occupational Therapy*

Departments of occupational therapy are now being established in sanitoria, psychopathic hospitals, and also in general hospitals. Certain facilities are necessary for them to operate successfully.

There will always be some work done by bed-patients and some by up-patients.

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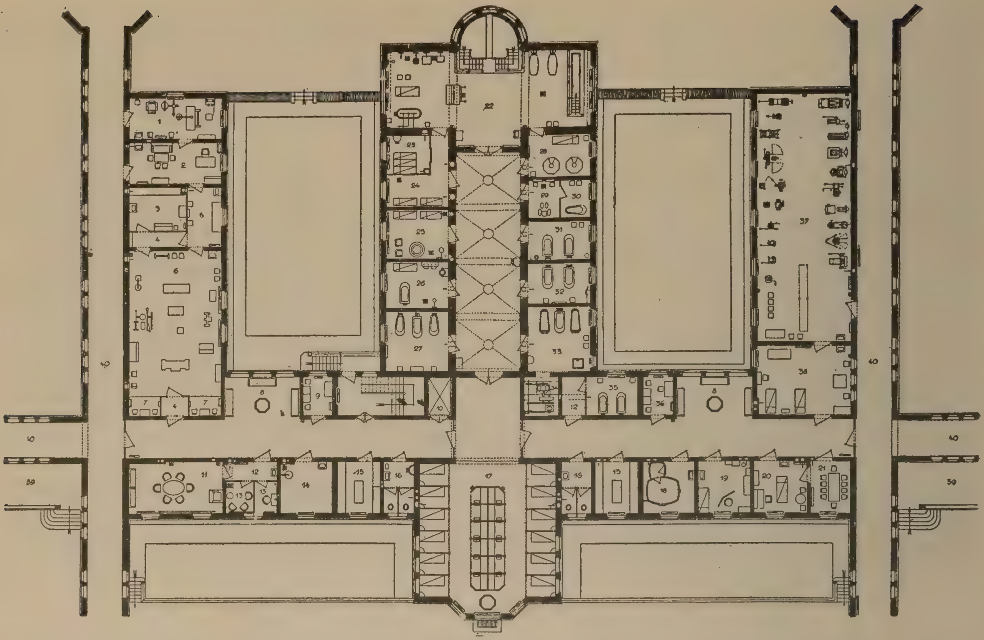
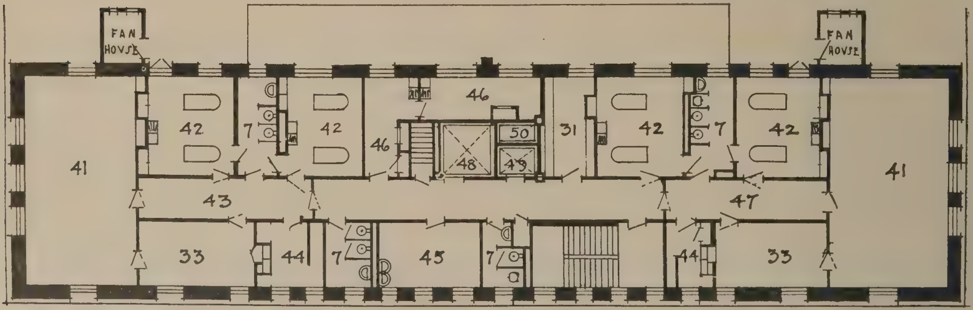
* The author is indebted for this material to Minnie Goodnow, R. N.



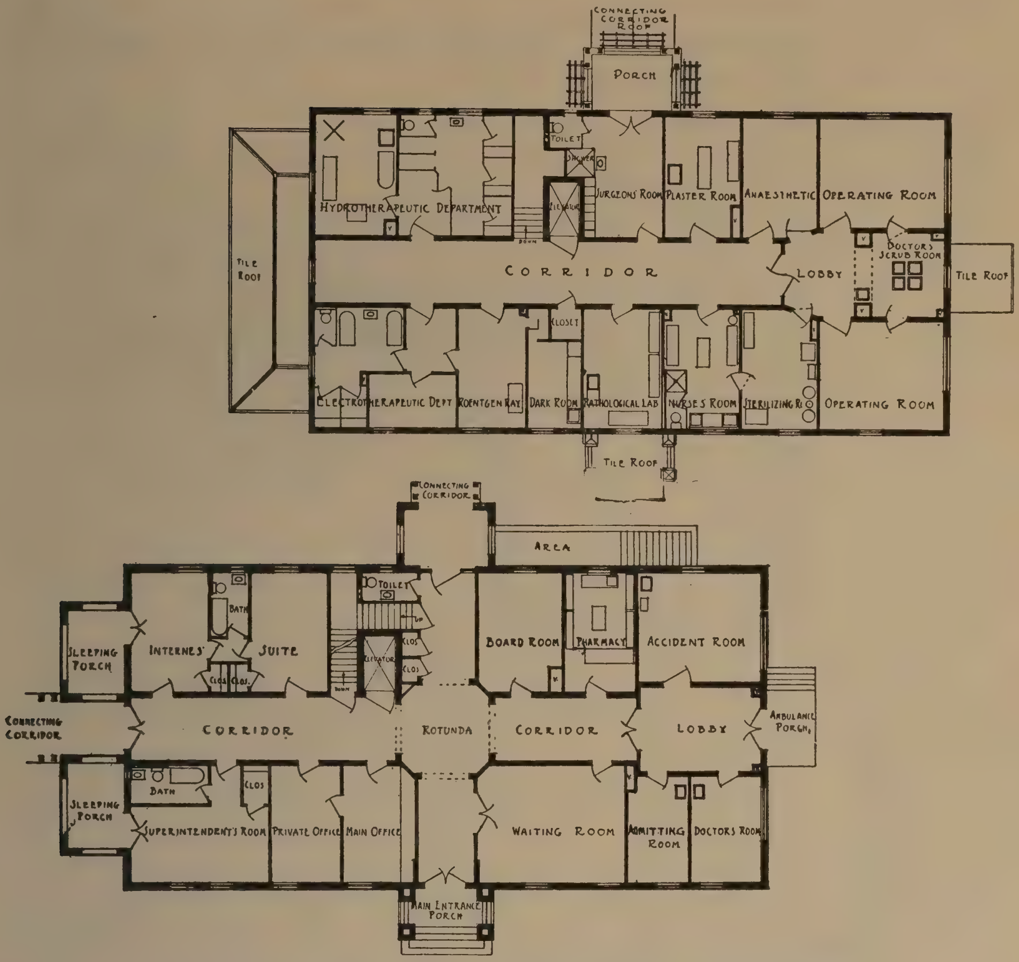
1. Roentgen therapeutics.
2. Physicians' room.
3. Dark room.
4. Light shaft.
5. Photograph laboratory.
6. Roentgen room.
7. Undressing room.
8. Waiting room.
9. Attendants' room.
10. Elevator.
11. Social room.
12. Ante-room.
13. Segregated room.
14. Light bath.
15. Wash room.
16. Toilet.
17. Rest room.
18. Pneumatic room.
19. Examination room.
20. Physicians' room.
21. Ante-room.
22. Douche room.
23. Hot air bath.
24. Warm air bath.
25. Vapor room.
26. Fango mud bath.
27. Mud bath.
28. Heat bath.
29. Four-cell bath.
30. Electric water bath.
31. Gas bath.
32. Salt water bath.
33. Sand bath.
34. Sand room.
35. Sulphur bath.
36. Female attendants' room.
37. Therapeutic gymnastics.
38. Masage room.
39. Rest room.
40. Hallway.

GROUND FLOOR PLAN, MEDICAL TREATMENT BUILDING, MUNICH-SCHWABING HOSPITAL, MUNICH, GERMANY
Richard Schachner, Architect

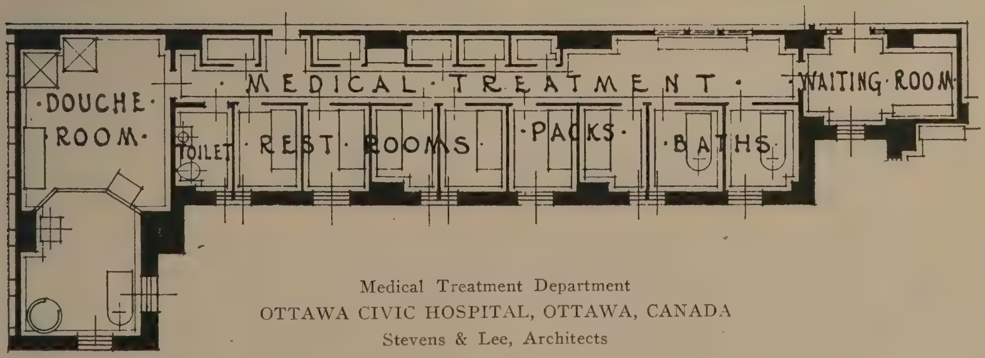


Courtesy, *The Modern Hospital*

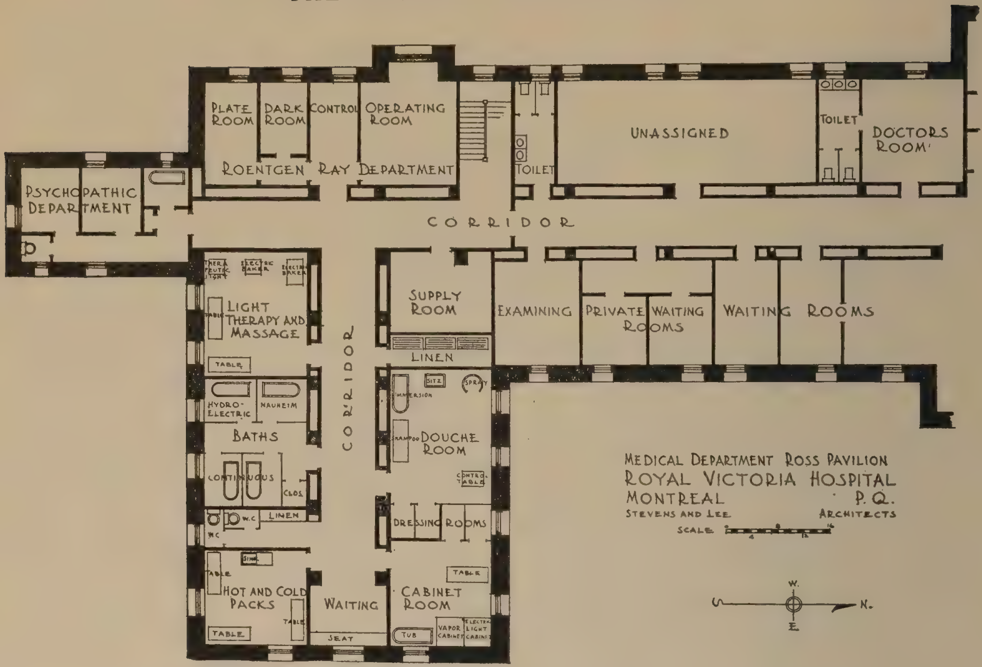
PSYCHOPATHIC BUILDING, COOK COUNTY HOSPITAL, CHICAGO, ILLINOIS.
HYDROTHERAPEUTIC DEPARTMENT ON TOP FLOOR.
Richard E. Schmidt, Garden & Martin, Architects.

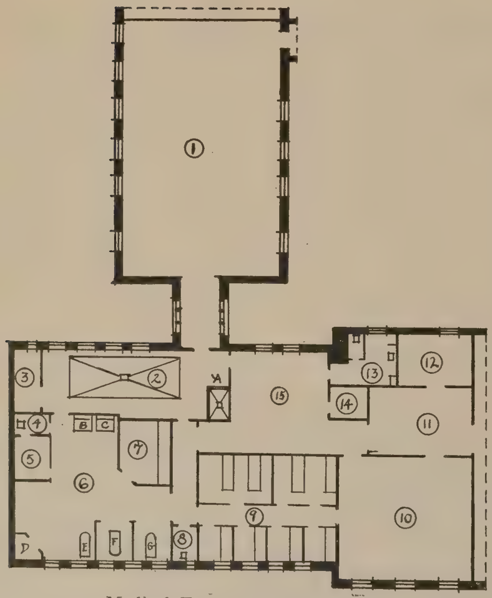


FLOOR PLANS, ADMINISTRATION BUILDING, ST. LUKE'S HOSPITAL, JACKSONVILLE, FLORIDA
Edward F. Stevens, Architect; Mellen C. Greeley, Associate Architect



Medical Treatment Department
OTTAWA CIVIC HOSPITAL, OTTAWA, CANADA
Stevens & Lee, Architects





Medical Treatment Department
SAN FRANCISCO HOSPITAL, SAN FRANCISCO, CALIFORNIA

1. Mechanical apparatus.
2. Plunge bath.
3. Pump room.
4. Toilet.
5. Irrigation room.
6. Douche room.
7. Steam room.
8. Toilet.
9. Dressing rooms.
10. Lounge room.
11. Hall.
12. Store room.
13. Toilet.
14. Closet.
15. Office.

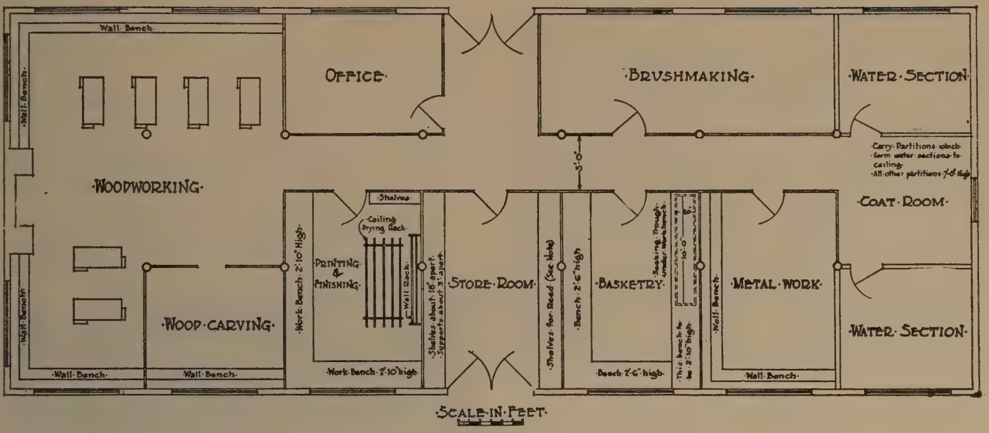
For the bed-patients, there should be storage space for materials and unfinished work near the wards in which they are; a shelf in the linen closet may be sufficient.

Up-patients usually prefer to go to a special occupation room. This should, when possible, be located near a group of wards, so that it may be easy of access. Very often the patients' sitting room or a sun-parlor may, with a little re-arrangement become also the occupation room.

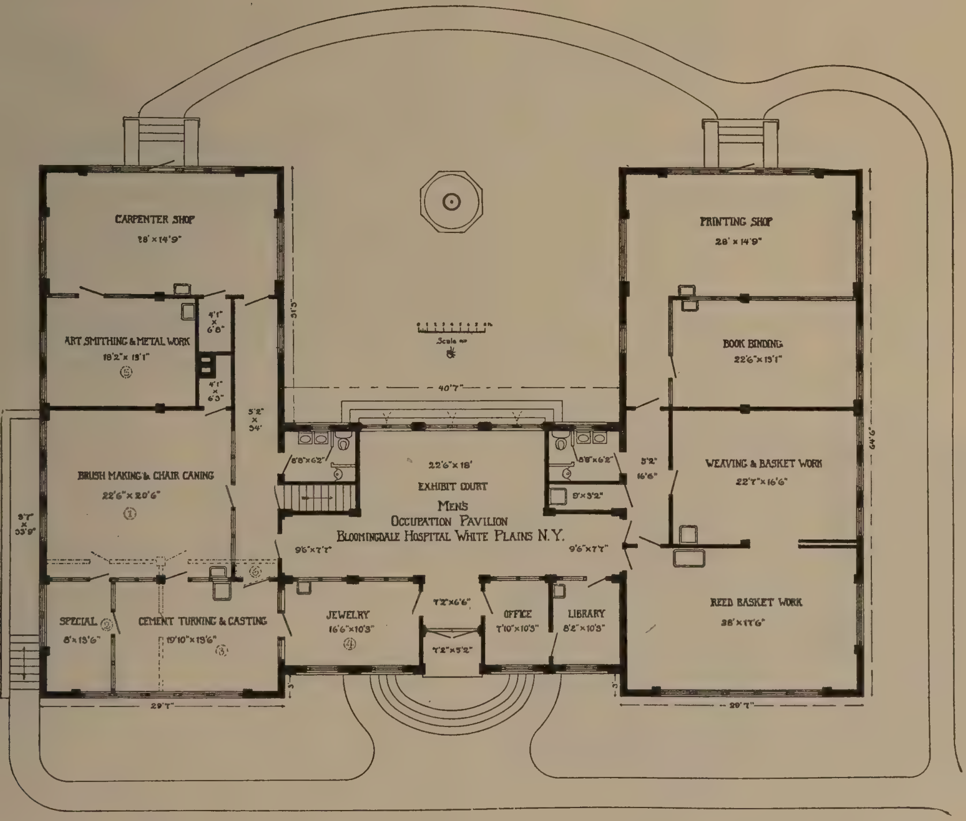
With men patients, a part or all of the occupation room should be a shop, one which *looks* like a shop, with a floor that will not be injured by shavings and other debris. If basketry is done, by either men or women, a small tub of water will be needed; it is advisable, therefore that the table and floor should be composed of material not harmed by wetting.

If the occupation room or shop is at a distance from the wards, it should have near it a rest room furnished with a couch and easy chairs. Overdoing is always to be guarded against, and the teacher of occupation will need to have facilities for her patients to rest at proper intervals.

The occupation room or shop must have *good light,* preferably sunshine, and



Plain of Building Remodelled for Occupational Therapy.
THE STATE HOSPITAL, COLLINS, N. Y.



Courtesy, *The Modern Hospital*

Plan of Men's Occupational Shops.
BLOOMINGDALE HOSPITAL, WHITE PLAINS, N. Y.

Hydro-Therapeutic Room
OTTAWA CIVIC HOSPITAL, OTTAWA, CANADA
Showing Control Table, Continuous Bath, Douche, Bath Shower, and Sitz Bath

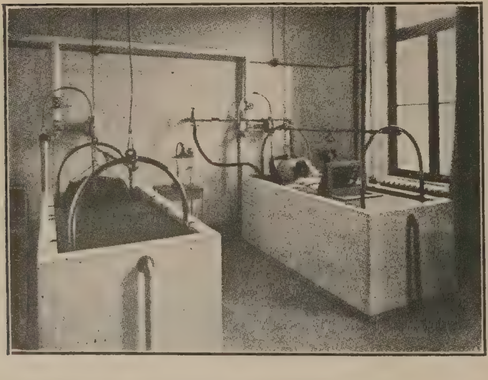
ample artificial lighting for dark days. Plenty of *storage space* for bulky materials is necessary in closets or cupboards with shelves, hooks, drawers or boxes for small articles. There should be a place to lock up small tools. In even a small department one needs a table or bench for woodwork, a large table for basketry and a table for painting. There should be space to store partly finished work, and a cupboard with lock for finished articles. In most institutions a display case will be placed in or near the main office, so that visitors may see the patients' work.

On page 23 we reproduce the plan of the men's occupational shops at *Bloomingdale Hospital,* White Plains, N. Y., where an elaborate program is carried out with mental cases. On the same page is shown the plan of a building remodelled for occupational therapy at the *State Hospital,* Collins, N. Y. Most mental hospitals are finding occupation a valuable curative agent and are providing more or less extensive departments for it.

Miss Susan E. Tracy, an authority on occupation, suggests that an occupation room may be a sitting room, veranda, roof garden, sun parlor, or any large room. She specifies as hindrances to satisfactory work basement rooms with poor light, noisy rooms, parlors or rooms with furnishings that are easily damaged, very small rooms or those reached by long corridors.

Most institutions which have established this work find that it quickly outgrows its original quarters. Space is therefore the great need, and rooms which are large enough for several good-sized work tables.

Courtesy, The Modern Hospital
ULTRA-VIOLET RAY TREATMENT



WATER BED

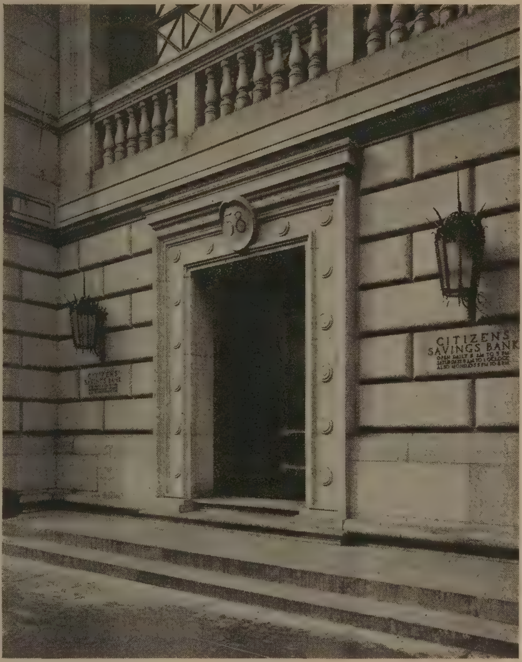
The CITIZEN'S SAVINGS BANK ~ NEW YORK ~

CLARENCE WILSON BRAZER, ARCHITECT

By Oliver Whitwell Wilson

THESE ARE DAYS when some Savings Banks are leaving the localities where they have built up their success. They are moving to new commercial centers in the city which appear to be more attractive.

It is a transmigration, inevitable, doubtless, but accompanied, none the less, by problems to be solved. There was a depositor in one such bank which had just entered upon its new and elaborate home. He changed his account to the Citizen's Savings Bank, and when asked his reason answered, "It made me feel shabby and out of place going to so grand a building in my working overalls and covered with grease." The contrast between the architecture and his small deposits and personal appearance was, evidently, too sharp.

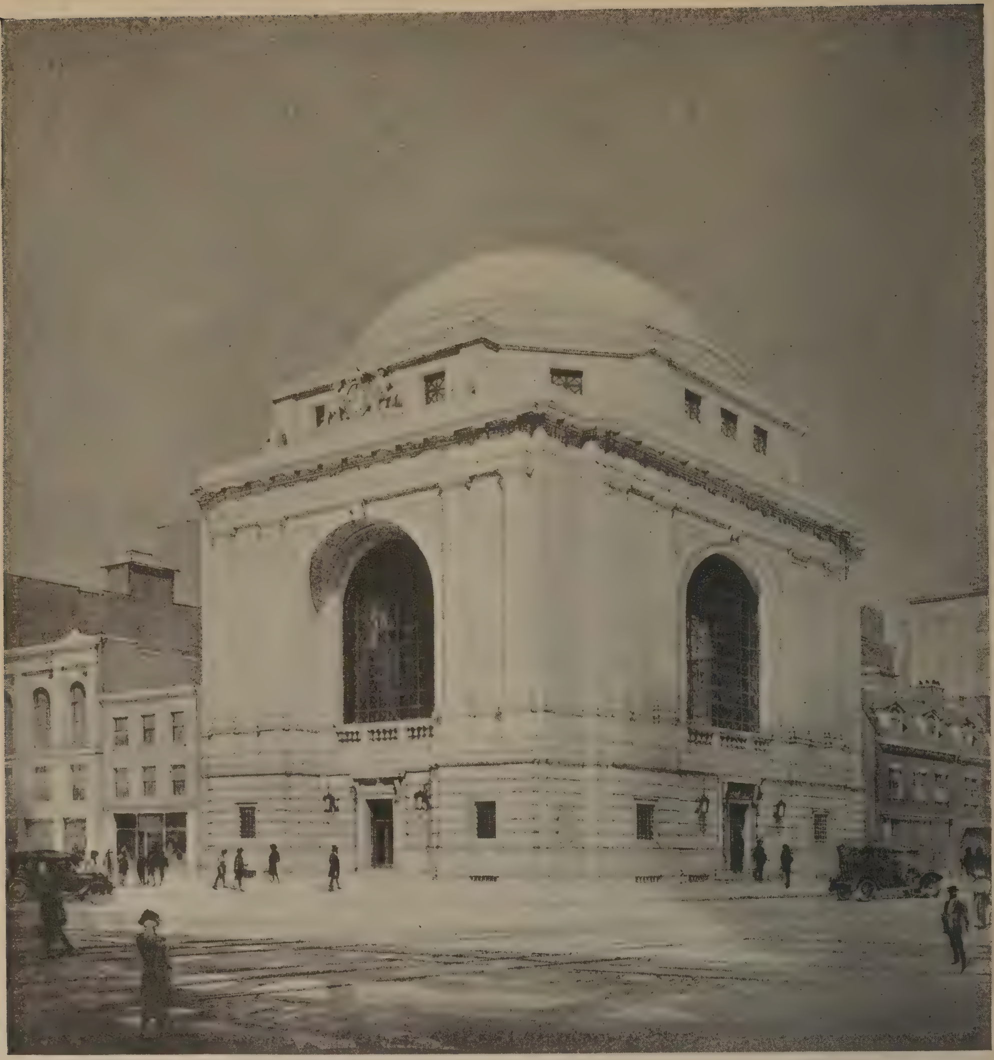


MAIN ENTRANCE DOOR

That, in a nutshell, was the problem which had to be solved by the Citizen's Savings Bank itself when the Directors decided that the time had come for improving their cramped quarters situated at the corner of the Bowery and Canal Street. Sixty years ago that old brown stone building seemed to be magnificent enough. But, now that the Bank had grown out of its early youth to a robust manhood, the brown stone looked as out of place as do the frontages of dwellings up town, when the modern apartment house makes its appearance next door. And it was decided that the Citizen's Savings Bank must build again; this time with modern light colored granite.

But where should the building be situated? Since 1862, the Citizen's Savings Bank had carried on its business at this particular corner. If the locality were changed, some of the more localized depositors might be tempted to withdraw their patronage. Also the corner was, in itself, strategic. It is at a central point in lower Manhattan. It faces the Manhattan Bridge Plaza and is on a main crosstown street which connects the arteries of traffic both of Manhattan and Brooklyn. To rebuild on the corner would be obviously an advantage. An adjoining twenty-five foot lot was bought and, with the existing property of fifty foot frontage, an approximately square corner site was ready for this purpose.

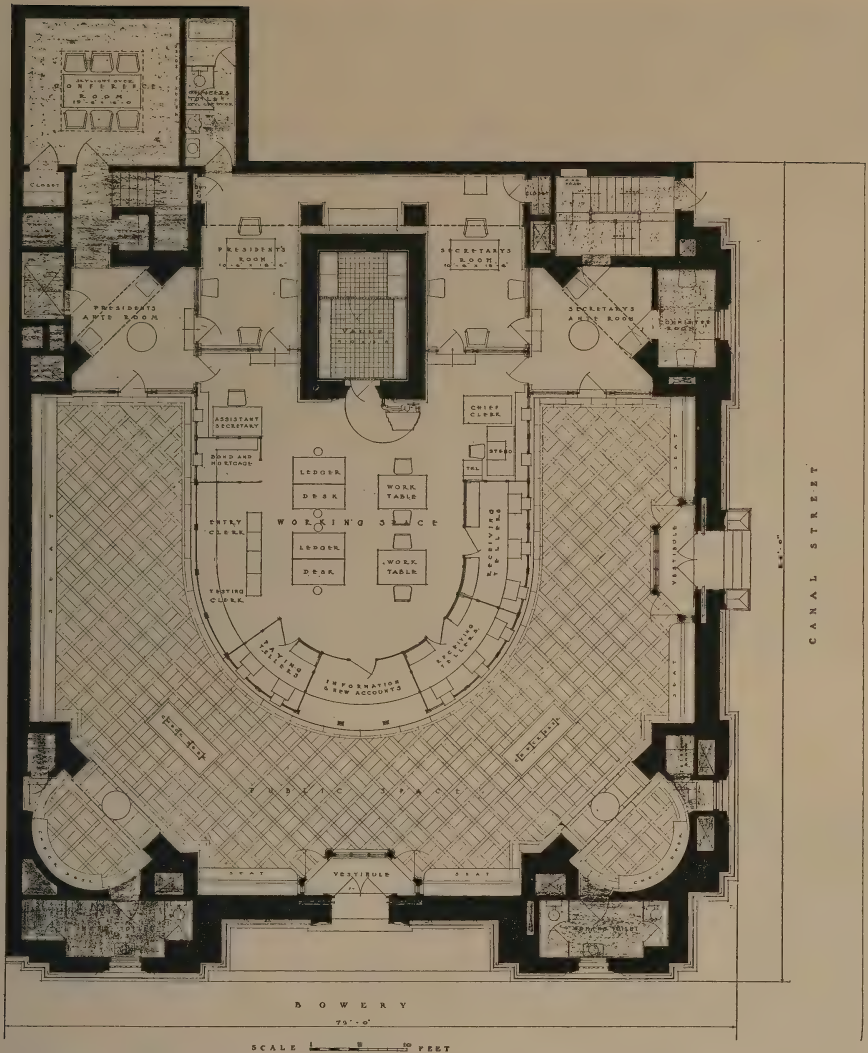
In 1923, Mr. Clarence Wilson Brazer was invited, as architect, to undertake the reconstruction. As the designer of several banking houses and having pre-



THE CITIZEN'S SAVINGS BANK, NEW YORK, N. Y.
(From a Rendering by A. M. Githens)

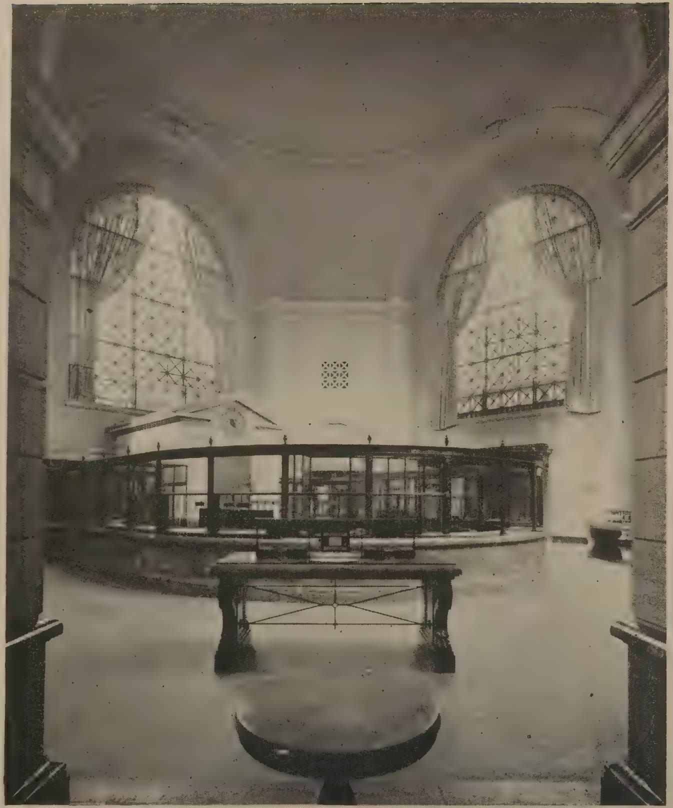
viously spent two years in the banking business he was well equipped to deal with such a problem. He had to handle a situation, at once psychological and practical. It was essential that nothing should be built which might offend the susceptibility of the small depositor. An elaborate or ornate building might cause the less thoughtful stockholder to ask "Why are you wasting our money on useless ornament?" Simplicity as well as dignity had to be the keynote of the problem.

Aesthetically, then, Mr. Brazer's task was by no means so simple as it might appear at first glance. The Bowery, once upon a time, has been a picturesque street of New York. As the bronze tablet on the corner of the new building acquaints the passer-by, it was at this point that General George Washington in 1783 began his triumphal entry into New York on the city's evacuation by the British at

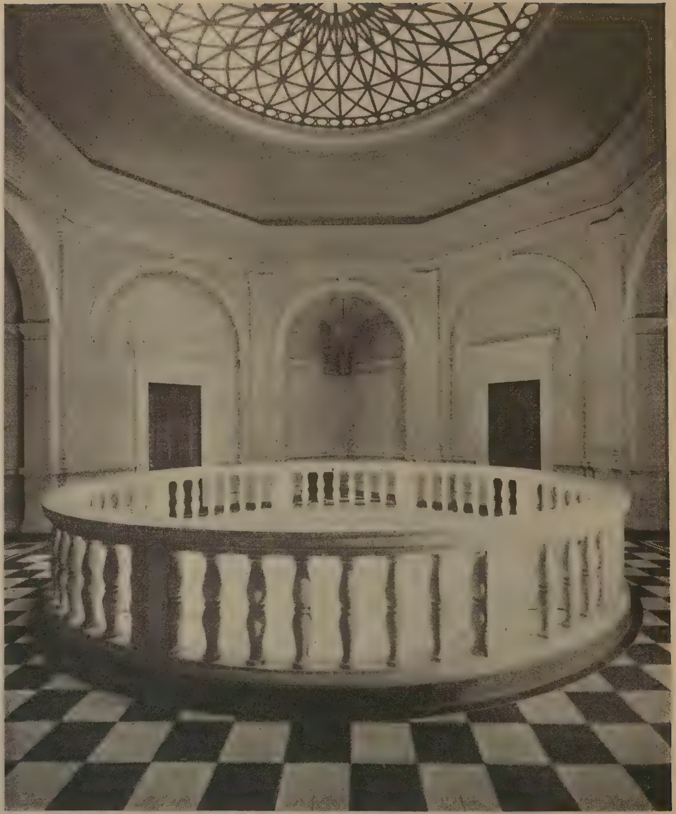


Banking Floor Plan
THE CITIZEN'S SAVINGS BANK, NEW YORK, N. Y.

the close of the Revolutionary War. But today, with the exception of the new bank, there is nothing in that immediate neighborhood worthy the name of architecture, except the Manhattan Bridge Approach across the Plaza which is conceived on a large monumental scale. To add to the difficulties, inherent in such an environment, the Third Avenue "L" runs along the Bowery, completely cutting off from view the first story of every building. In handling these factors, Mr. Brazer used simple elements. He adopted a single motive for his elevation which would be in harmony with the arched Bridge approach. By making the base of his building an important feature of the design he ensured that the structure of the elevated railway would not noticeably cut the design in half when viewed from the Plaza. To quote the Walrus and the Carpenter, *"If this were only*

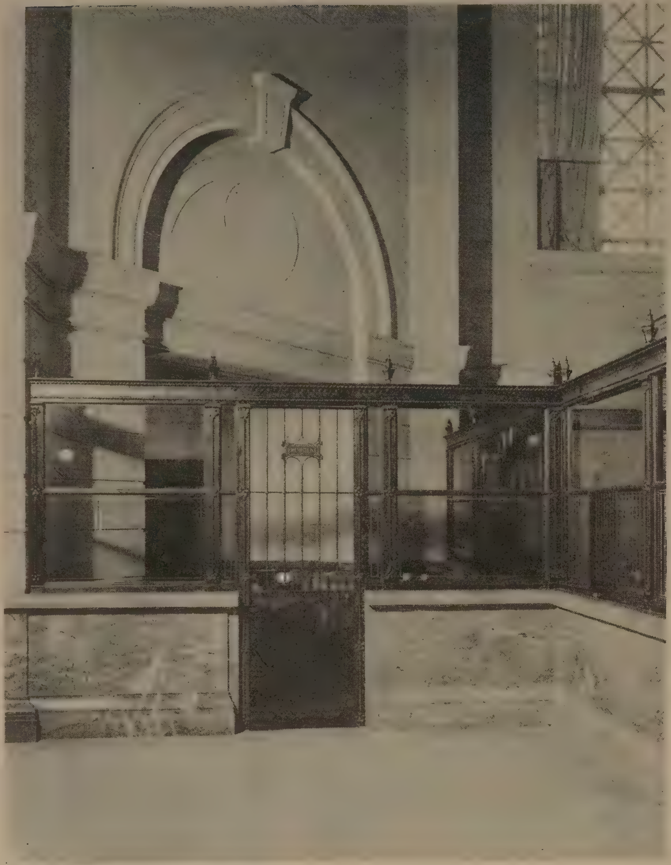


General Interior View

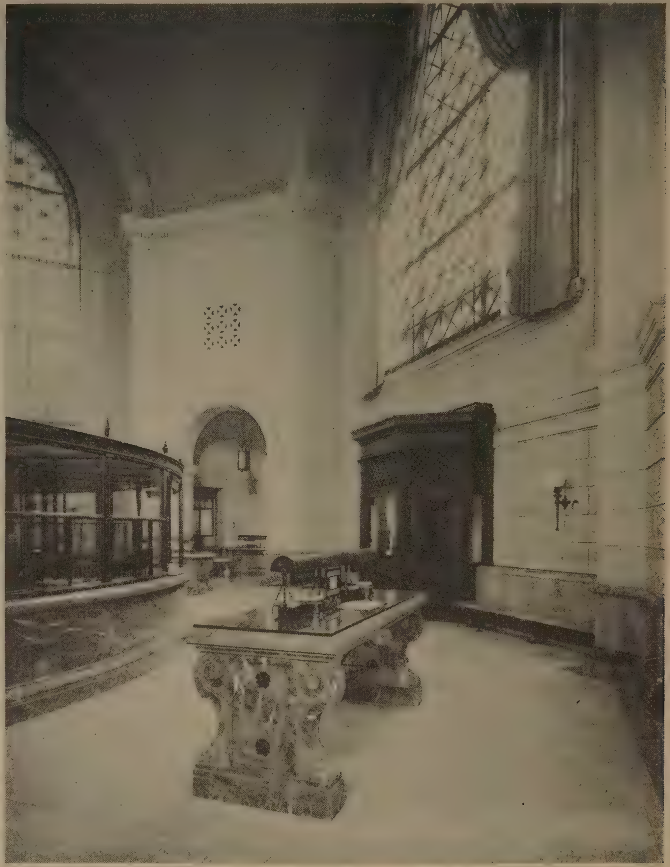


Top Floor Rotunda

THE CITIZEN'S SAVINGS BANK, NEW YORK, N. Y.
Clarence Wilson Brazer, Architect



Wrought Iron Bank Screen by Samuel Yellin



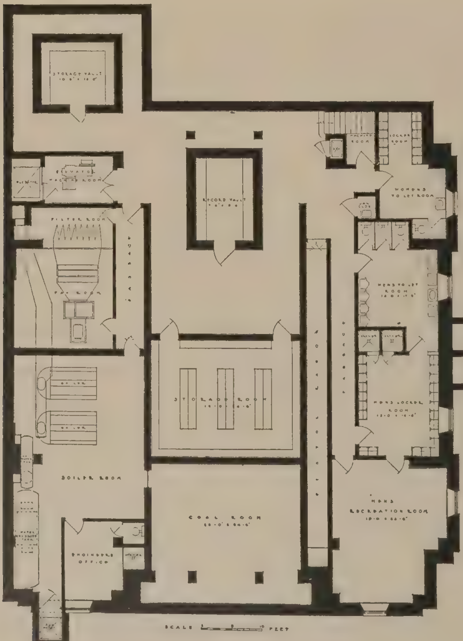
Public Space and Check Desk

THE CITIZEN'S SAVINGS BANK, NEW YORK, N. Y.

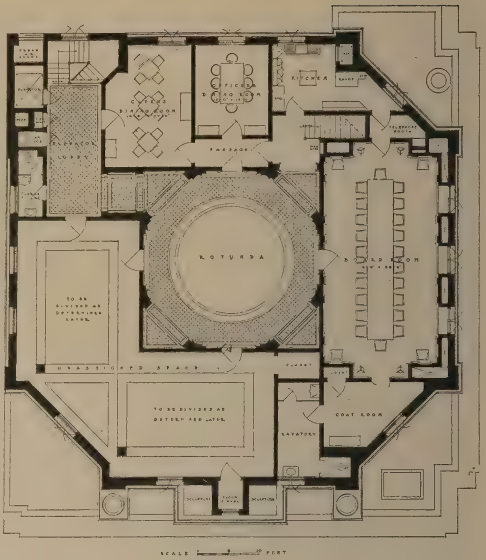
Clarence Wilson Brazer, Architect

cleared away," they said, "it would be grand!" Some day, it is hoped, the elevated will become a thing of the past and the base of the bank will then take its due place with the remainder of the design. In the meantime, Mr. Brazer has overcome a discouraging eyesore in a most satisfactory manner.

The new building has a frontage of seventy-five feet on the Bowery by eighty-five feet on Canal Street, thus giving an almost square site. In the design of a Savings Bank, such dimensions are very desirable. They allow for centralization of control and plenty of room for public space. Most of the transactions are small; there are many of them; and it is most important that the depositors should not wait too long. In the Citizen's Savings Bank, the vault has been placed at the rear and in full sight of any person entering. On either side are the offices for the President and other officers, and in front are the tellers' cages in the form of a U thus permitting a maximum service for the large public space that surrounds them, a space which takes up two-thirds of the available floor.



BASEMENT PLAN

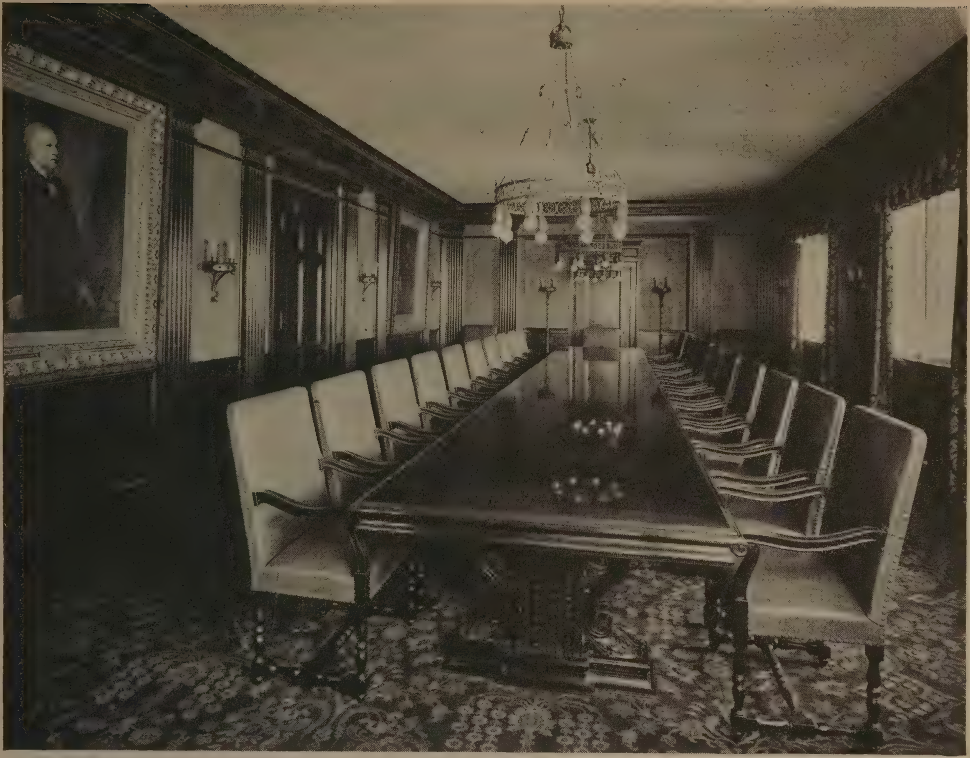


TOP FLOOR PLAN

The vault in itself is an interesting piece of design. Mr Brazer has treated it in the manner of the small treasuries that have been found at Delphi and other Greek religious centres. This vault with its massive steel door advertises the strength and stability of the Bank as a financial institution.

As the main floor consists of this one banking room, it became necessary to express it on the exterior. Being a corner lot, Mr. Brazer has seen a great opportunity for getting away from the usual façade design that is typical of thousands of banks of a similar size in this country. He has set his building on a strong rusticated base of Florentine character, the only openings being the two doors on Canal Street and the Bowery and the small windows on either side of them. There was a practical reason for this strength in the base. The building is in the midst of an easily excited population and riots are not unknown. The bank is thus protected against such a mob and could hold out until help arrived.

Above the base, large arched windows on all four sides of the bank give adequate light to the working space. Those on the street sides are recessed between coupled pilasters which, with the Doric cornice of



Trustees' Room
THE CITIZEN'S SAVINGS BANK, NEW YORK, N. Y.
Clarence Wilson Brazer, Architect

excellent proportions, gives to the main body of the building the imposing dignity that should be the characteristic of a bank.

The building is covered with a dome set on an octagonal attic, a treatment rendered famous throughout the world by its use on the Library at Columbia University. Light Barre granite was chosen for the exterior stone. It has given to a beautiful design a sense of permanence. The dome is covered with terra cotta tiles which match the granite below and it is an outstanding feature on the skyline. At present there are no buildings taller than the bank in its immediate vicinity. As one comes off the bridge, the Bank thus stands in full view, the architectural pioneer of what could be one of the finest open spaces in the city.

A notable feature of the exterior is the clock on the Bowery façade reproduced on Page 32. It is set in a stone frame based on the bank's seal between two stone beehives and is the work of Charles Keck, sculptor.

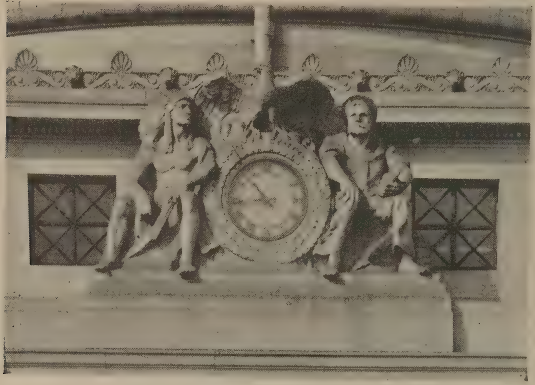
Roman Travertine and Golden-veined Famoso marble have been used for the interior. They give a warm, inviting look. The main banking space is octagonal with the four windows already mentioned on the main axes and small recesses on the other sides. The domed ceiling rises from pendentives between the arches of the windows to a gallery around an eye in the center. This acts as the means of communication between the various rooms in an upper floor at the level of the exterior attic.

Most of the success of the interior treatment is due to the use of handworked wrought iron in the banking screen, light fixtures and check desk equipment. Here we see work that machinery alone cannot produce, and it is fitting that in a bank for men and women who toil all day long, such handwork as that of Samuel Yellin should have been available.

Besides the necessary mechanical equipment, for instance, boilers with their coal storage, ventilating equipment and elevator machinery, there are in the basement two additional vaults for storage purposes and for records. There is also a storage room for files, a pistol range, recreation rooms and the necessary locker and toilet facilities for both men and women employees of the bank.

The upper floor above the interior dome has been used for the more private functions of the Bank. Here is placed the Board Room with its attractive treatment of pilasters and panelling and with furniture in harmony. Adjacent to this room is a coat room and lavatory. There are also two dining rooms, one for the officers and the other for the clerks of the bank, and the necessary kitchen. There is still some unassigned space which could be used for future needs. The decoration of these rooms and their interior furnishing, all of which had the personal direction of Mr. Brazer, suggests a good club.

A word may be added about the construction of the Bank which is one of the noteworthy features of the building's story. The new edifice was built literally around, over and under the old building. Business never stopped, for as soon as half the new banking space was completed, the officers and clerks moved into it from what remained of the old building thus allowing for the complete demolition of the old building and the final completion of the new. And as the bank thus shed its old skin like a chrysalis and the new building grew around it, the depositors became more and more interested in the new home of their bank; thus the construction in itself served as an advertisement.



Clock on Bowery façade of Bank
Charles Keck, Sculptor

PORTFOLIO

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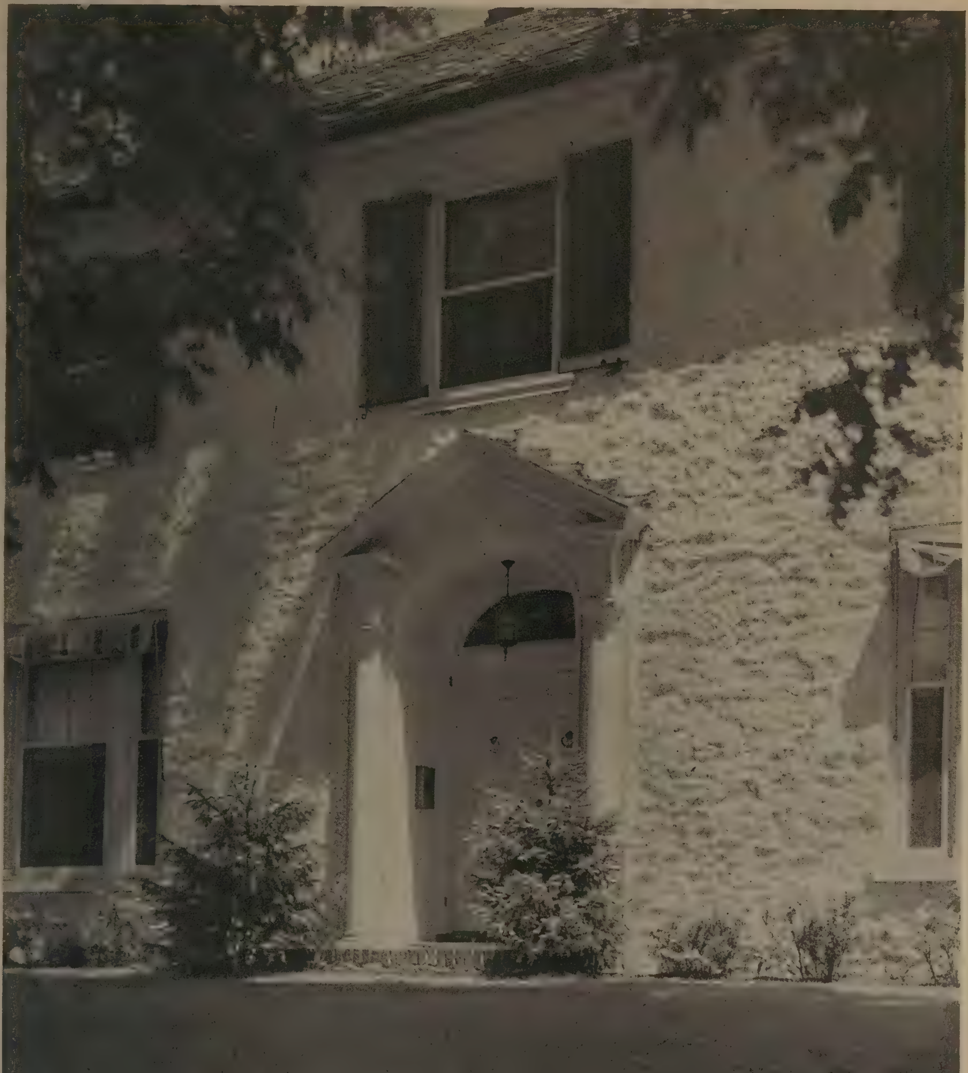
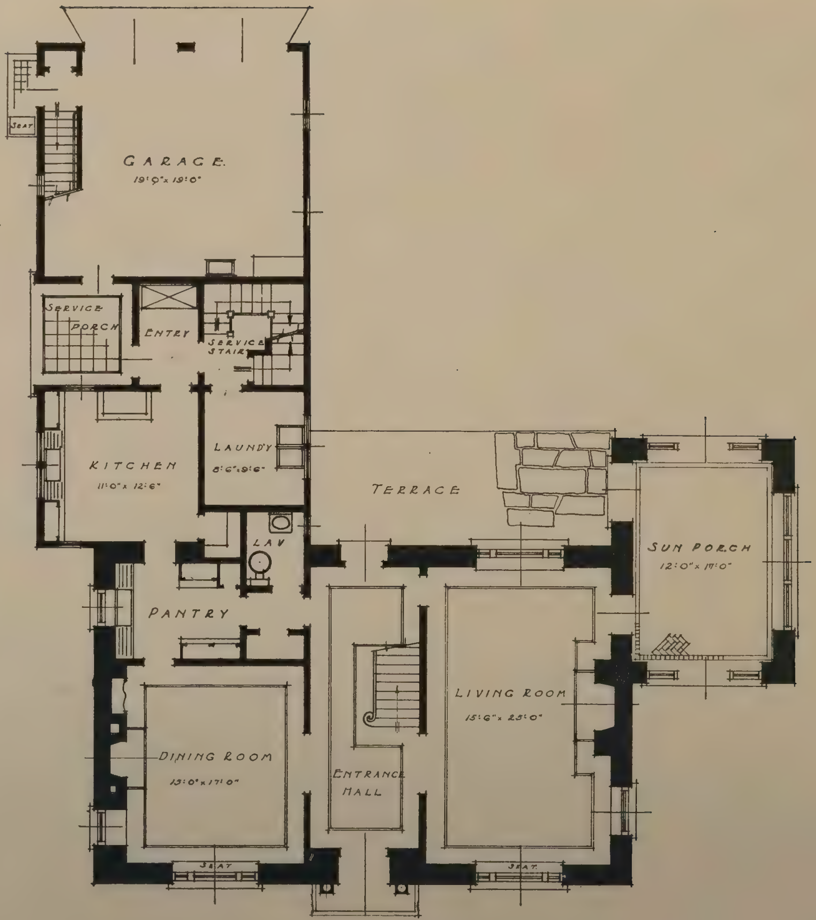


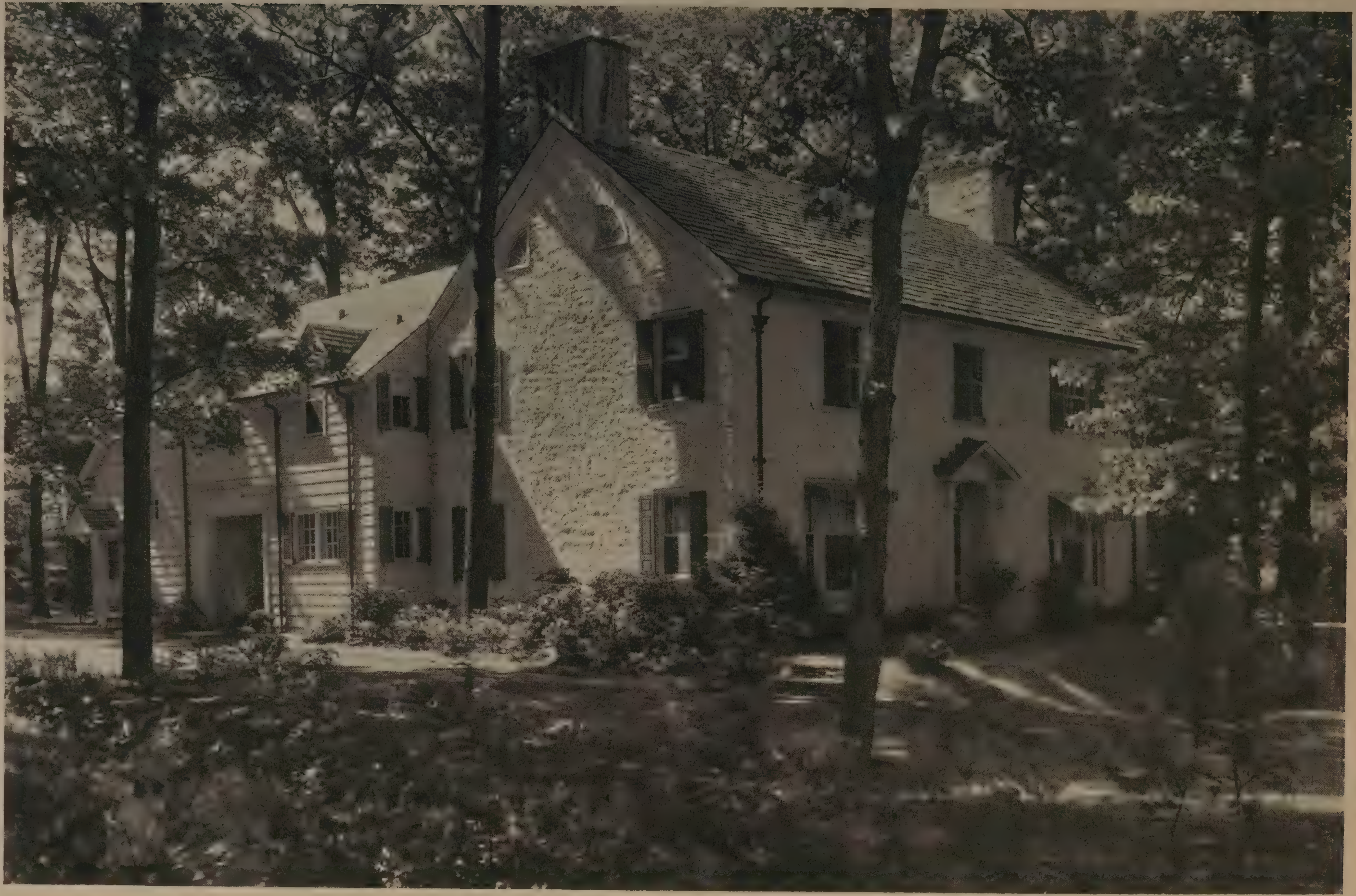
A RESIDENCE IN FIELDSTON, NEW YORK CITY
Dwight James Baum, Architect



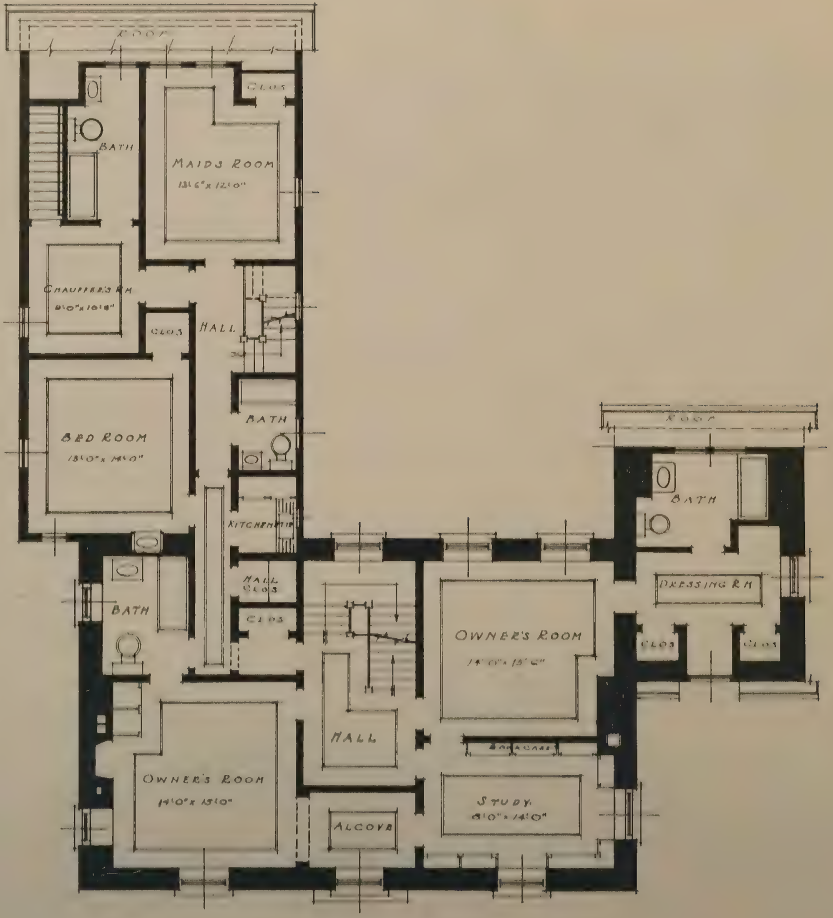
First Floor Plan

A RESIDENCE IN FIELDSTON, NEW YORK CITY

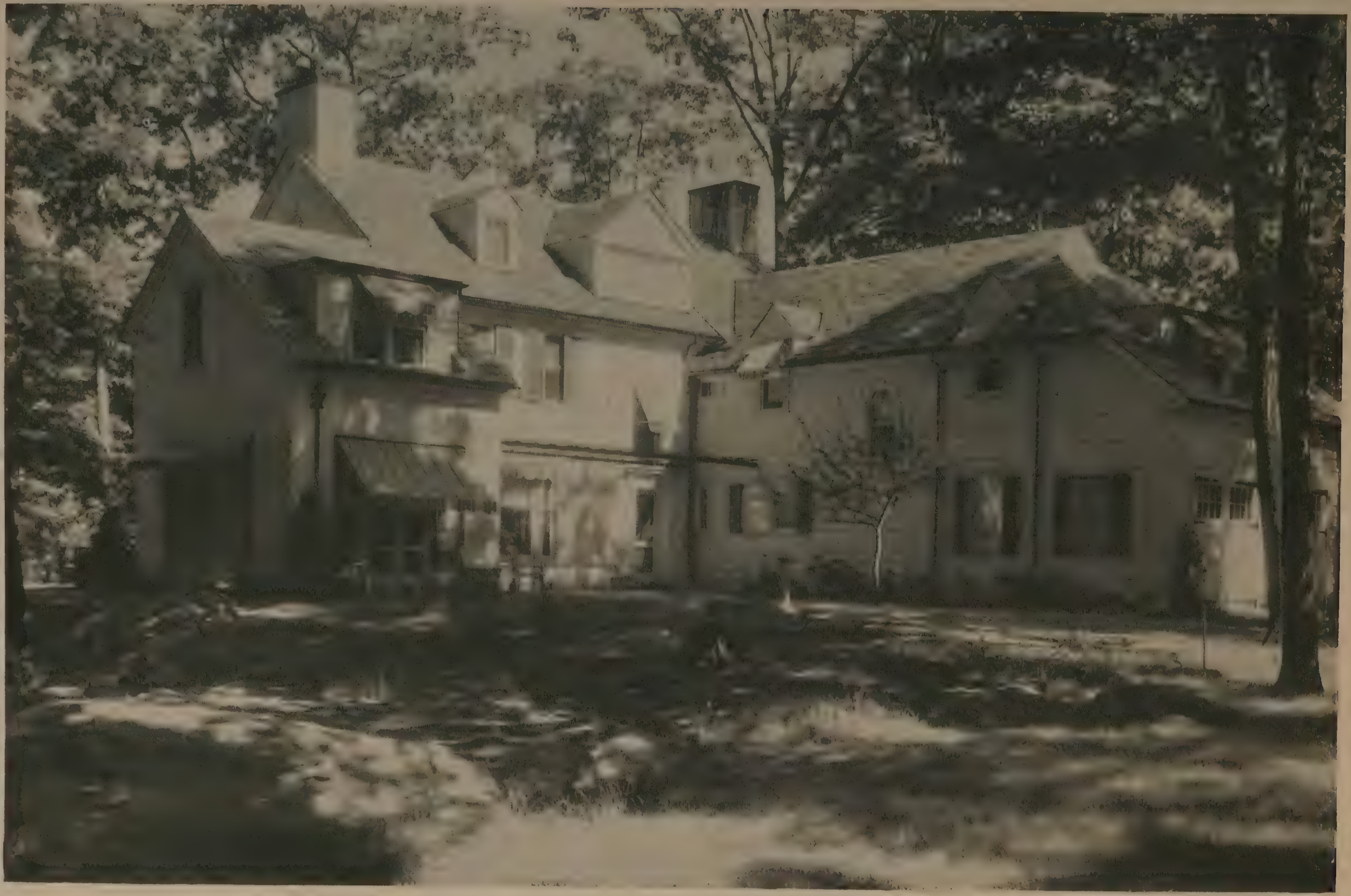
Dwight James Baum, Architect



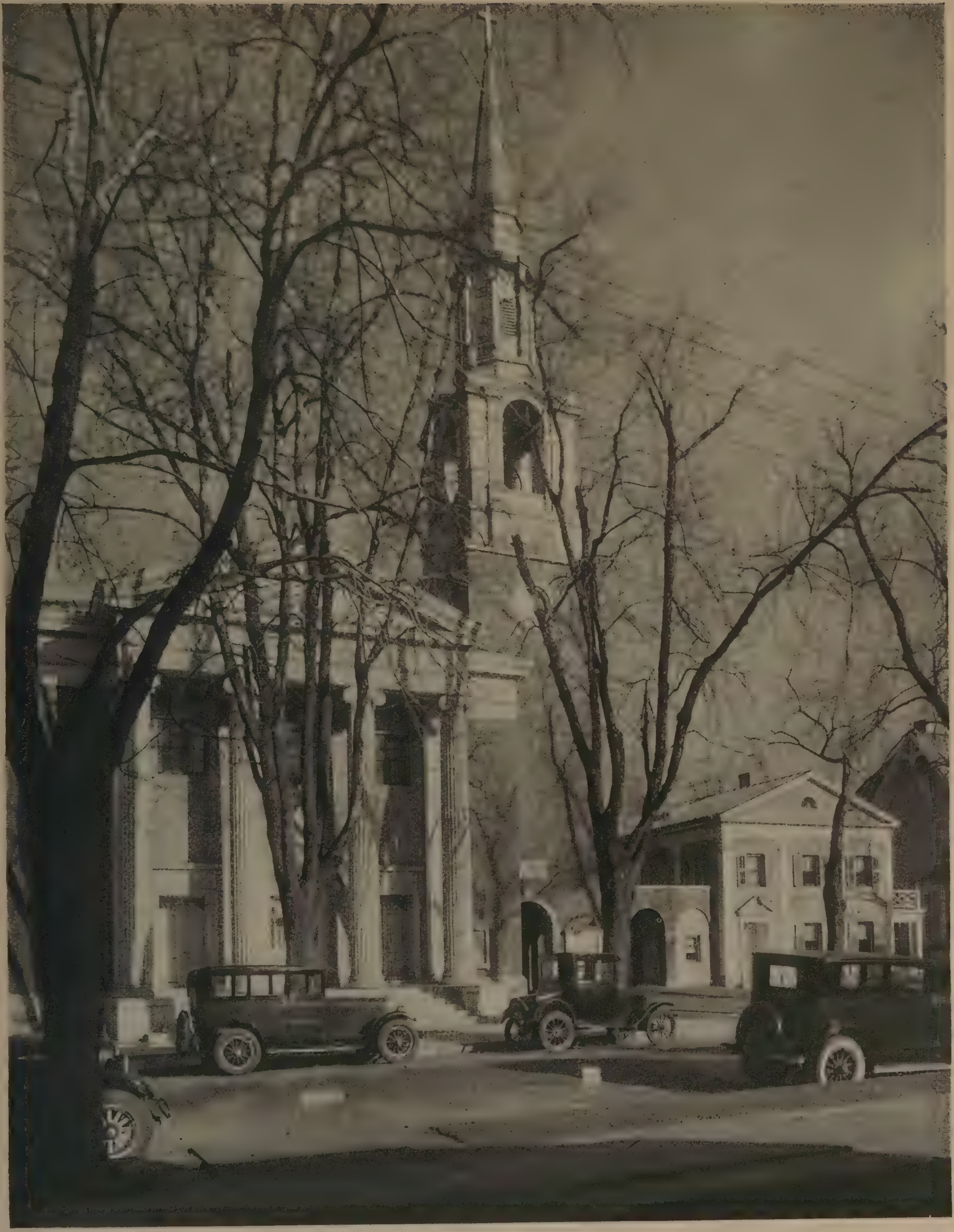
A RESIDENCE IN FIELDSTON, NEW YORK CITY
Dwight James Baum, Architect



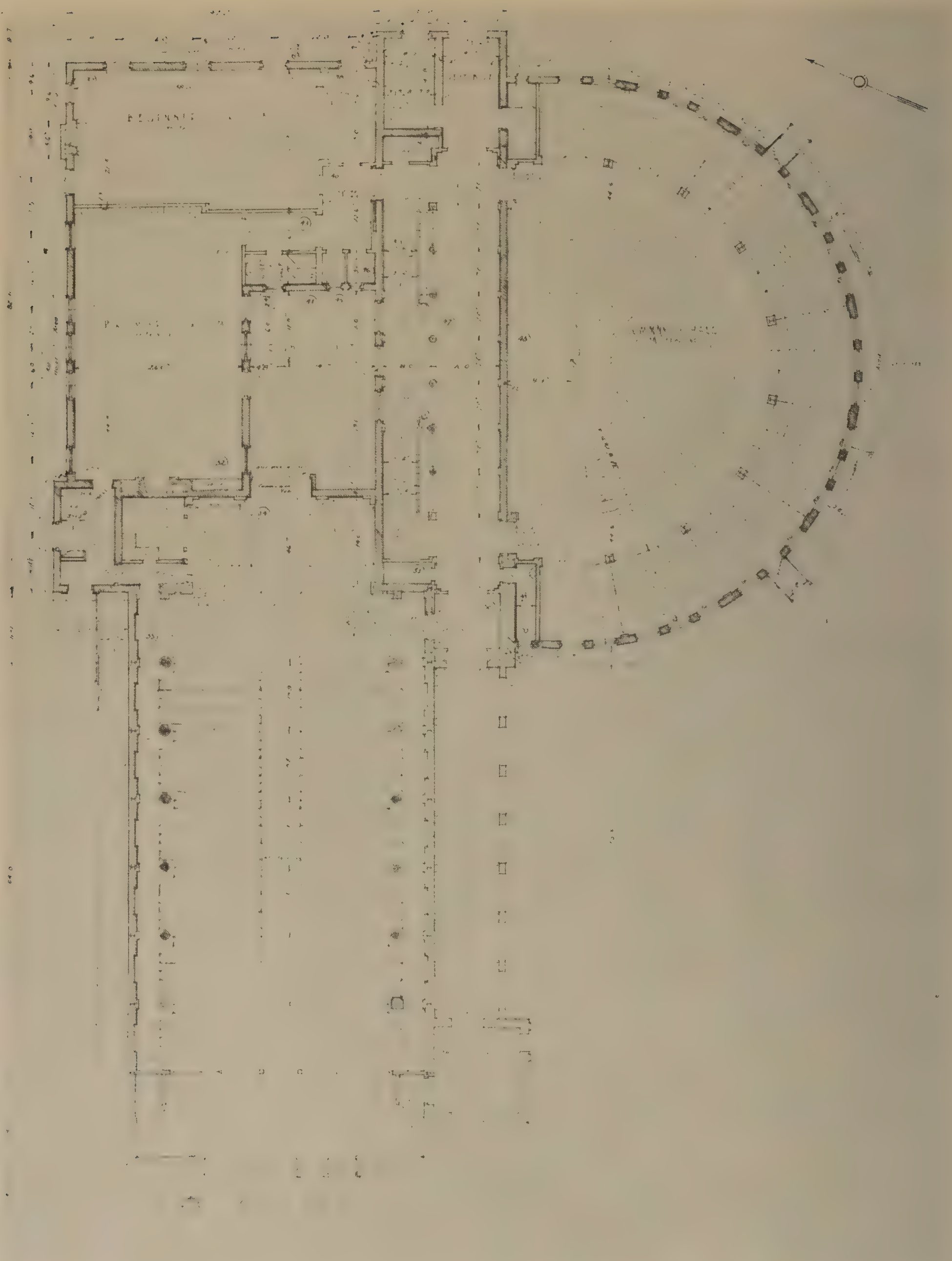
Second Floor Plan
A RESIDENCE IN FIELDSTON, NEW YORK CITY
Dwight James Baum, Architect



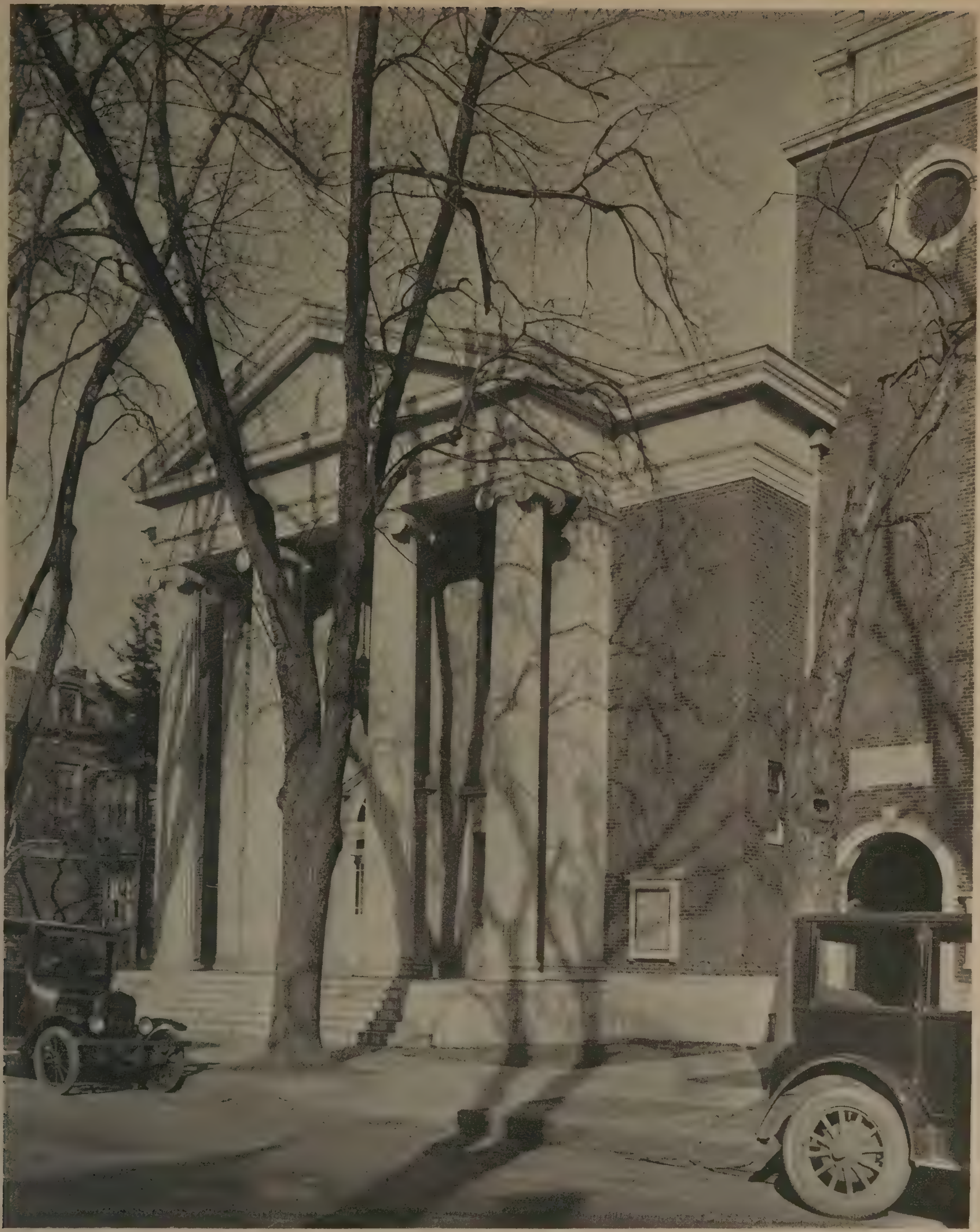
A RESIDENCE IN FIELDSTON, NEW YORK CITY
Dwight James Baum, Architect



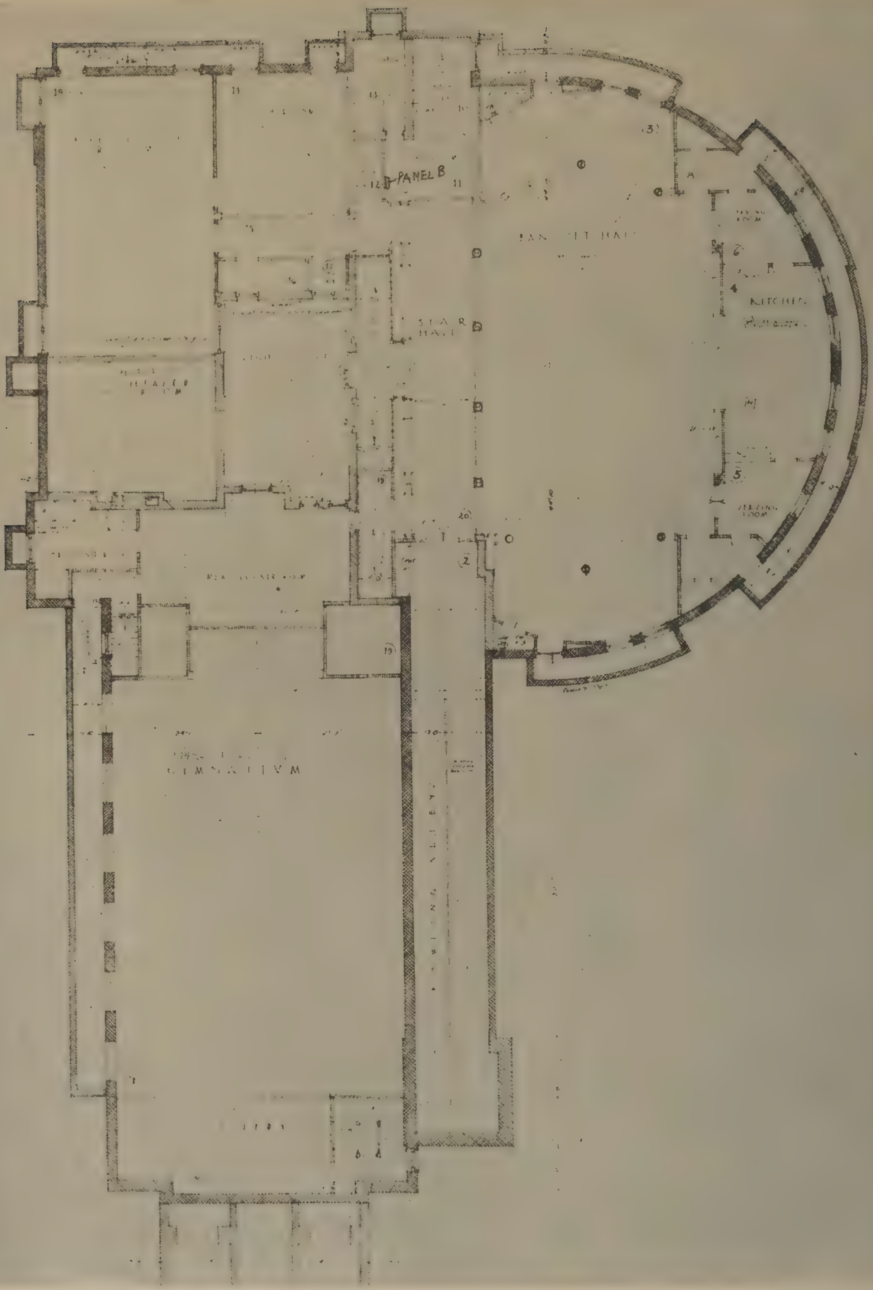
FIRST METHODIST EPISCOPAL CHURCH, JAMAICA, L. I.
Joseph Hudnut, Architect



First Floor Plan
FIRST METHODIST EPISCOPAL CHURCH, JAMAICA, L. I.
Joseph Hudnut, Architect



FIRST METHODIST EPISCOPAL CHURCH, JAMAICA, L. I.
Joseph Hudnut, Architect



Basement Plan
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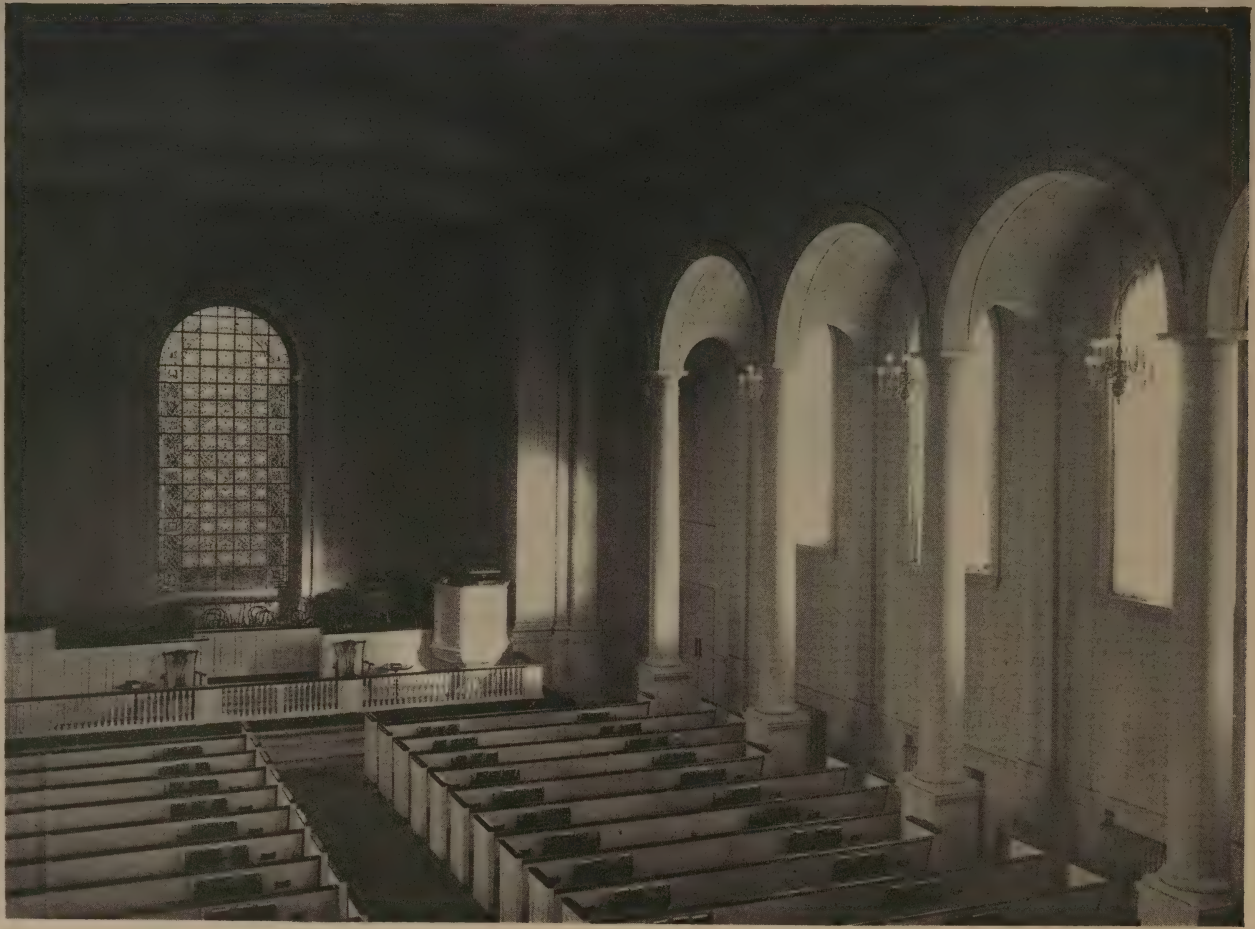
Joseph Hudnut, Architect



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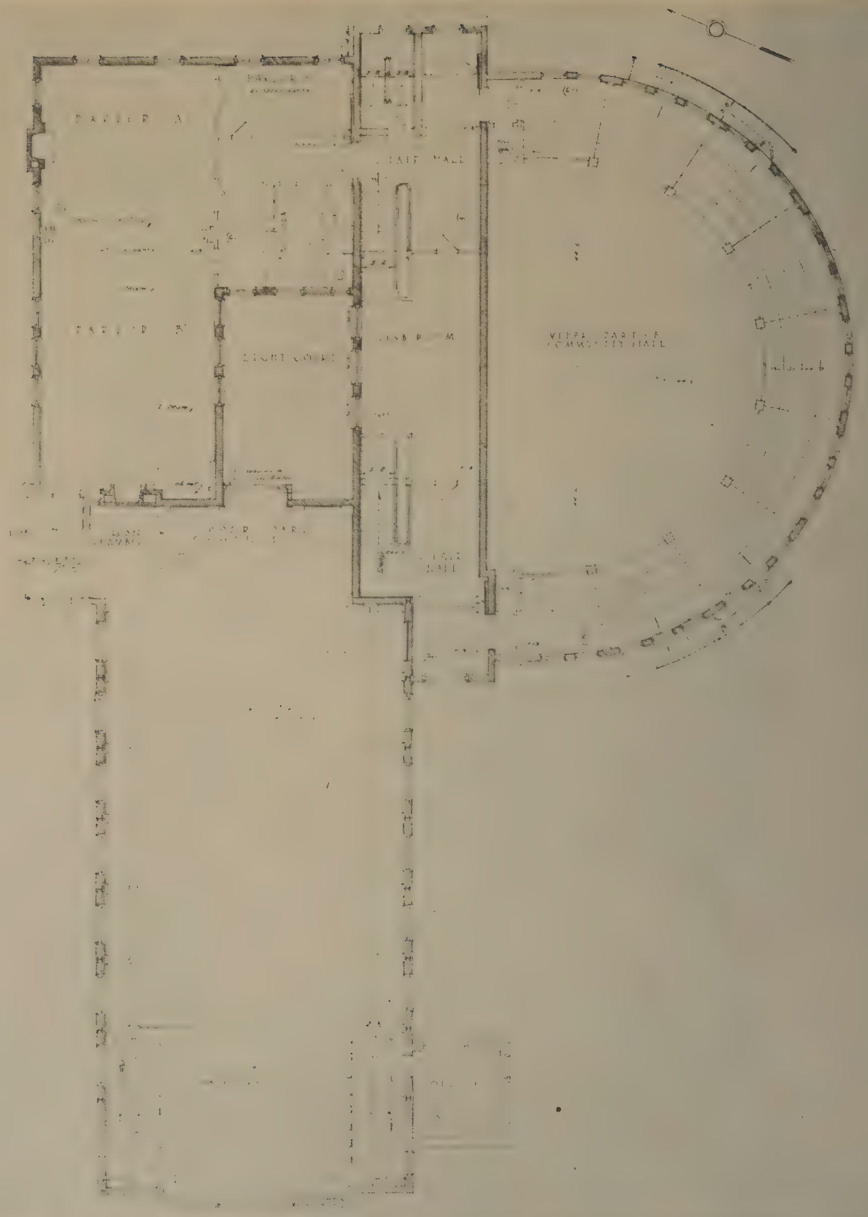
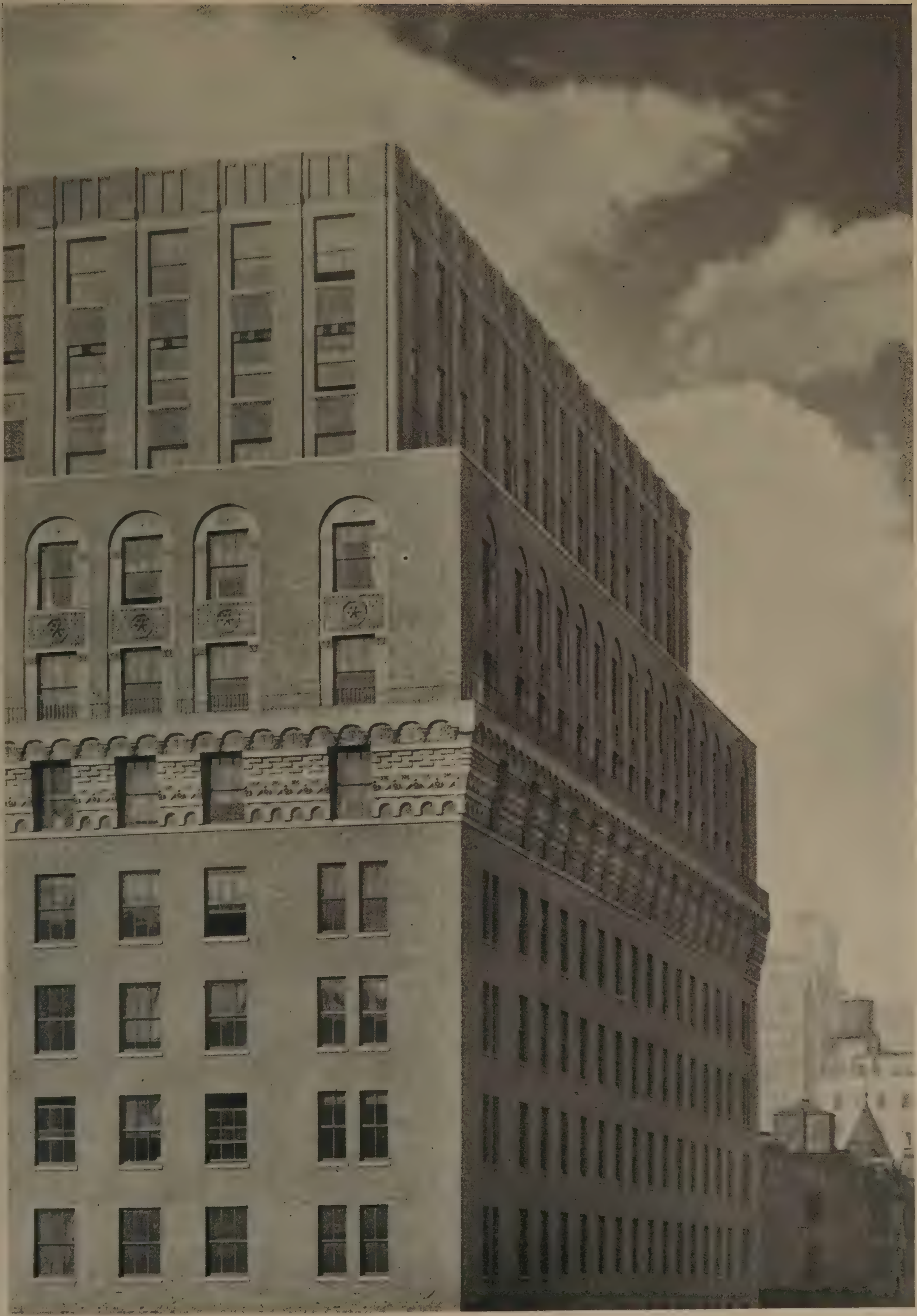
Joseph Hudnut, Architect



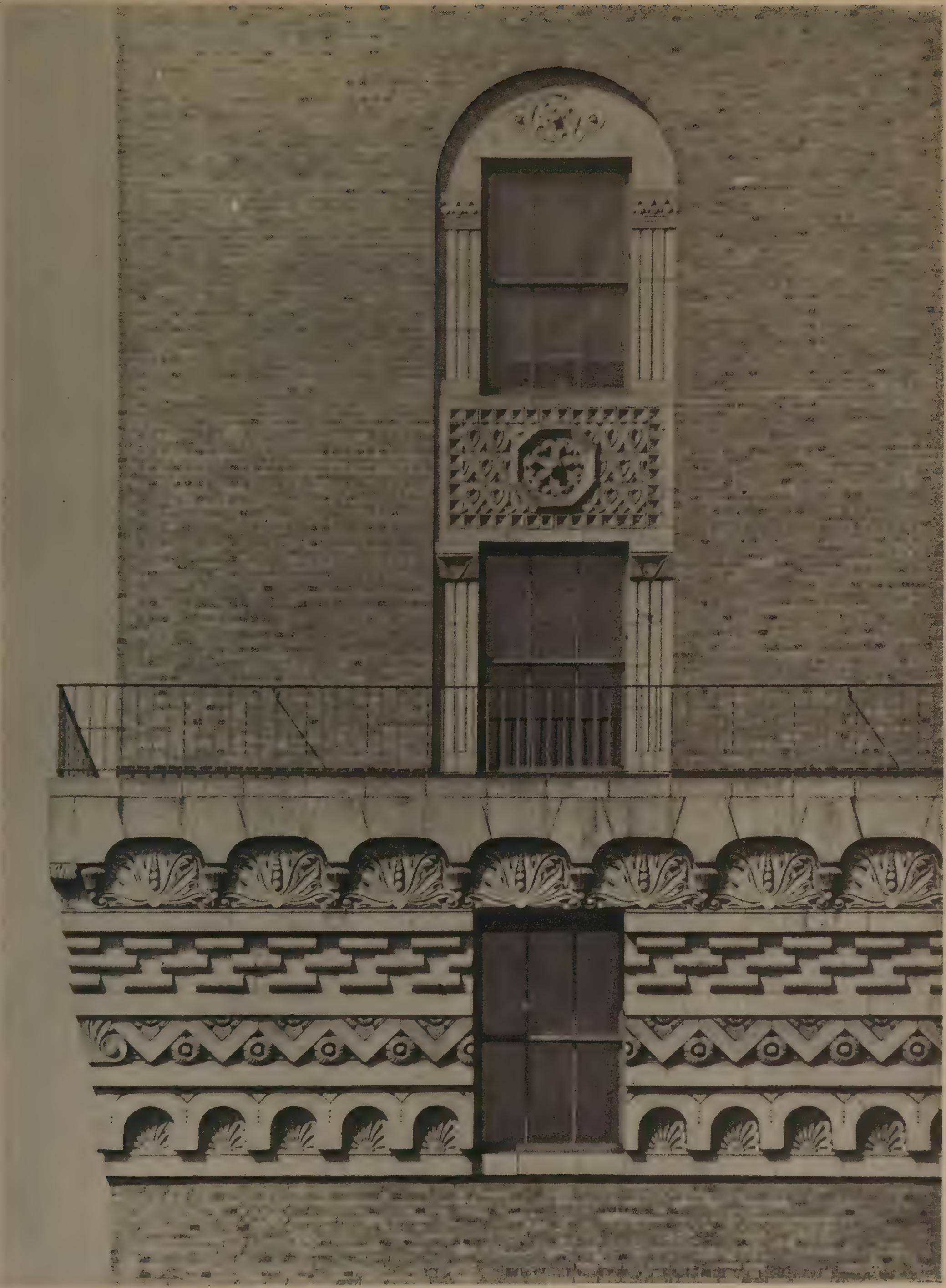
Second Floor Plan
FIRST METHODIST EPISCOPAL CHURCH, JAMAICA, L. I.
Joseph Hudnut, Architect



Photo, Sigurd Fischer

NEW YORK FURNITURE EXCHANGE, 206 LEXINGTON AVENUE, NEW YORK

Buchman & Kahn, Architects

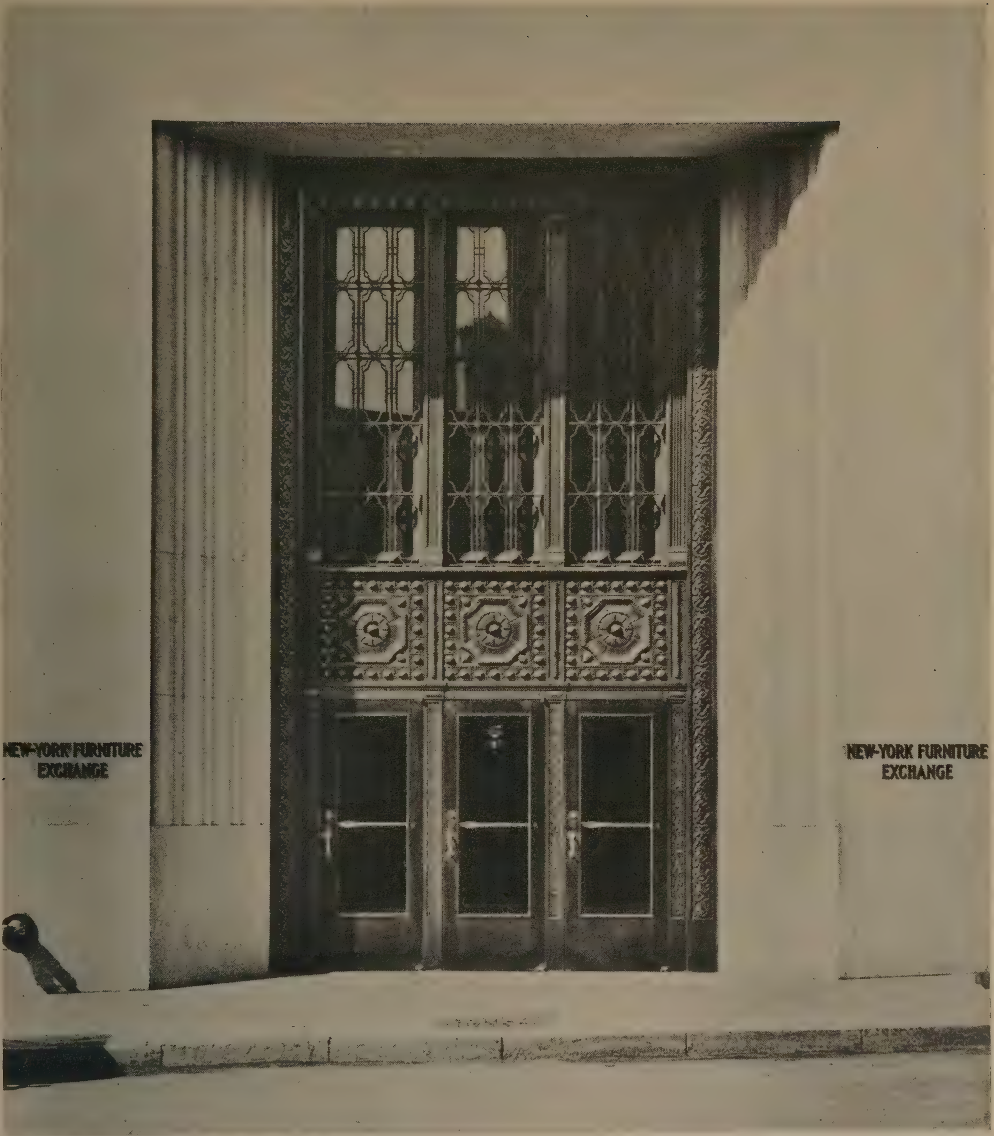


Photo, Sigurd Fischer

Detail of Cornice

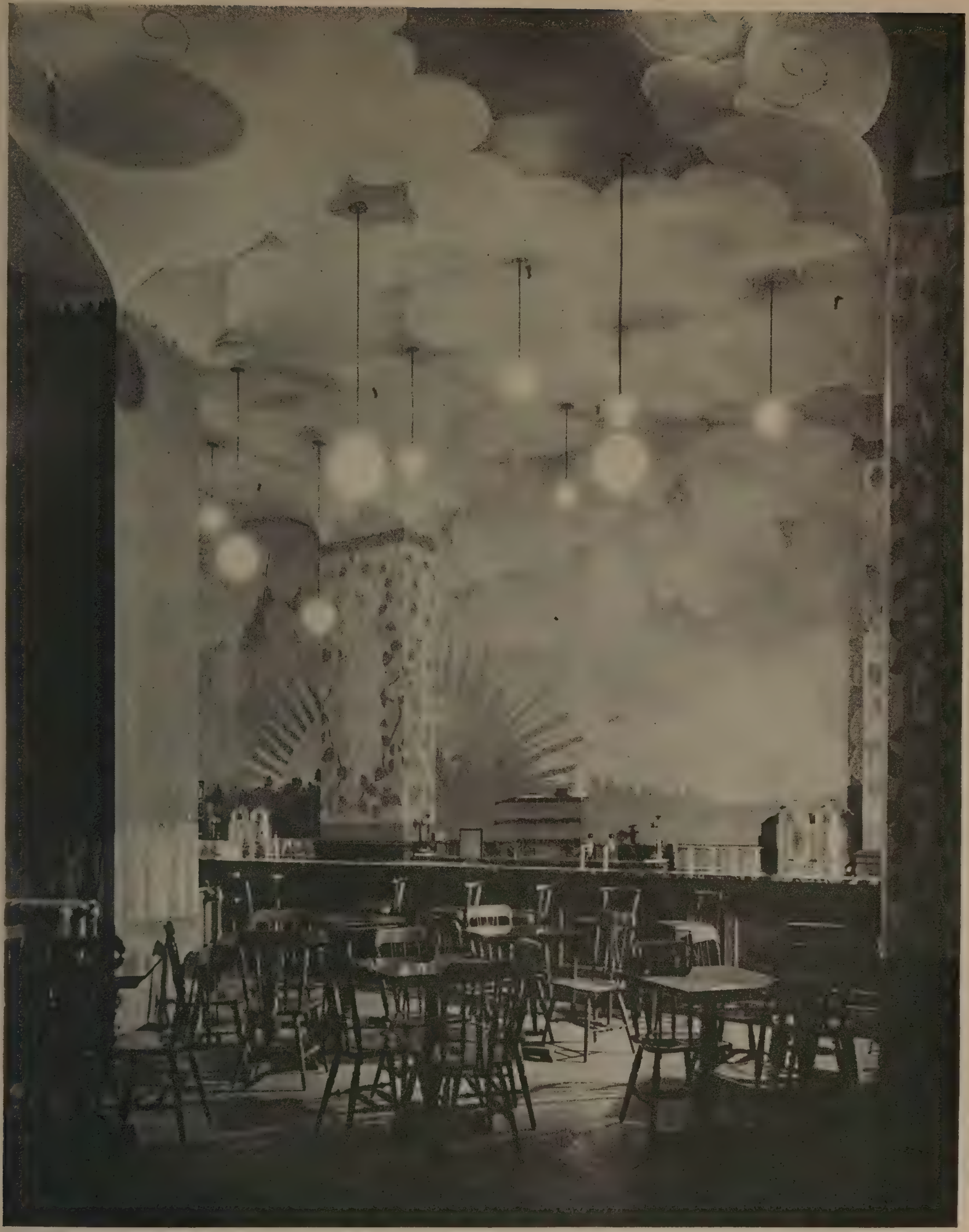
NEW YORK FURNITURE EXCHANGE, 206 LEXINGTON AVENUE, NEW YORK

Buchman & Kahn, Architects



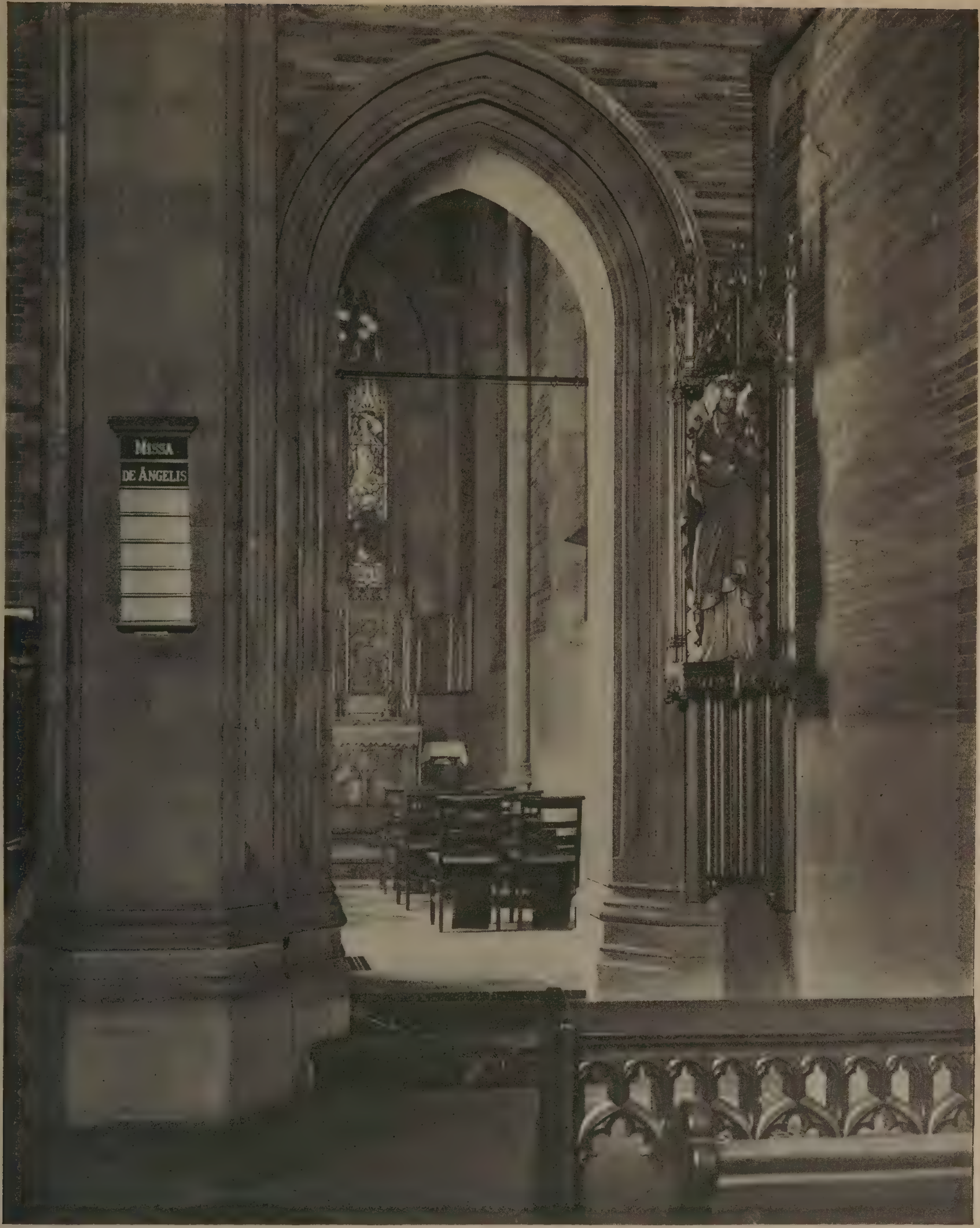
Photo, Sigurd Fischer

Entrance Detail
NEW YORK FURNITURE EXCHANGE, 206 LEXINGTON AVENUE, NEW YORK
Buchman & Kahn, Architects

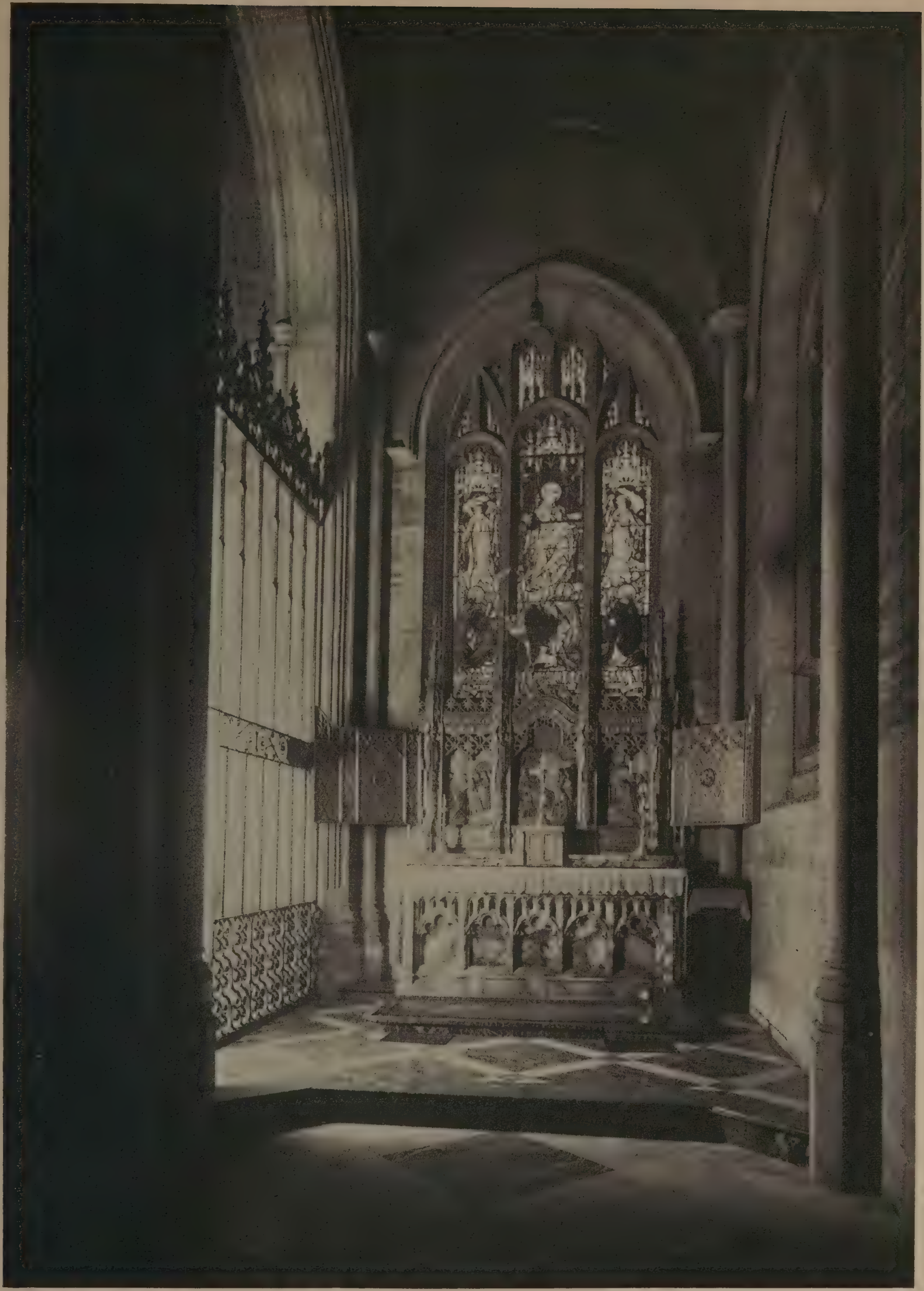


Photo, S. H. Gottscho

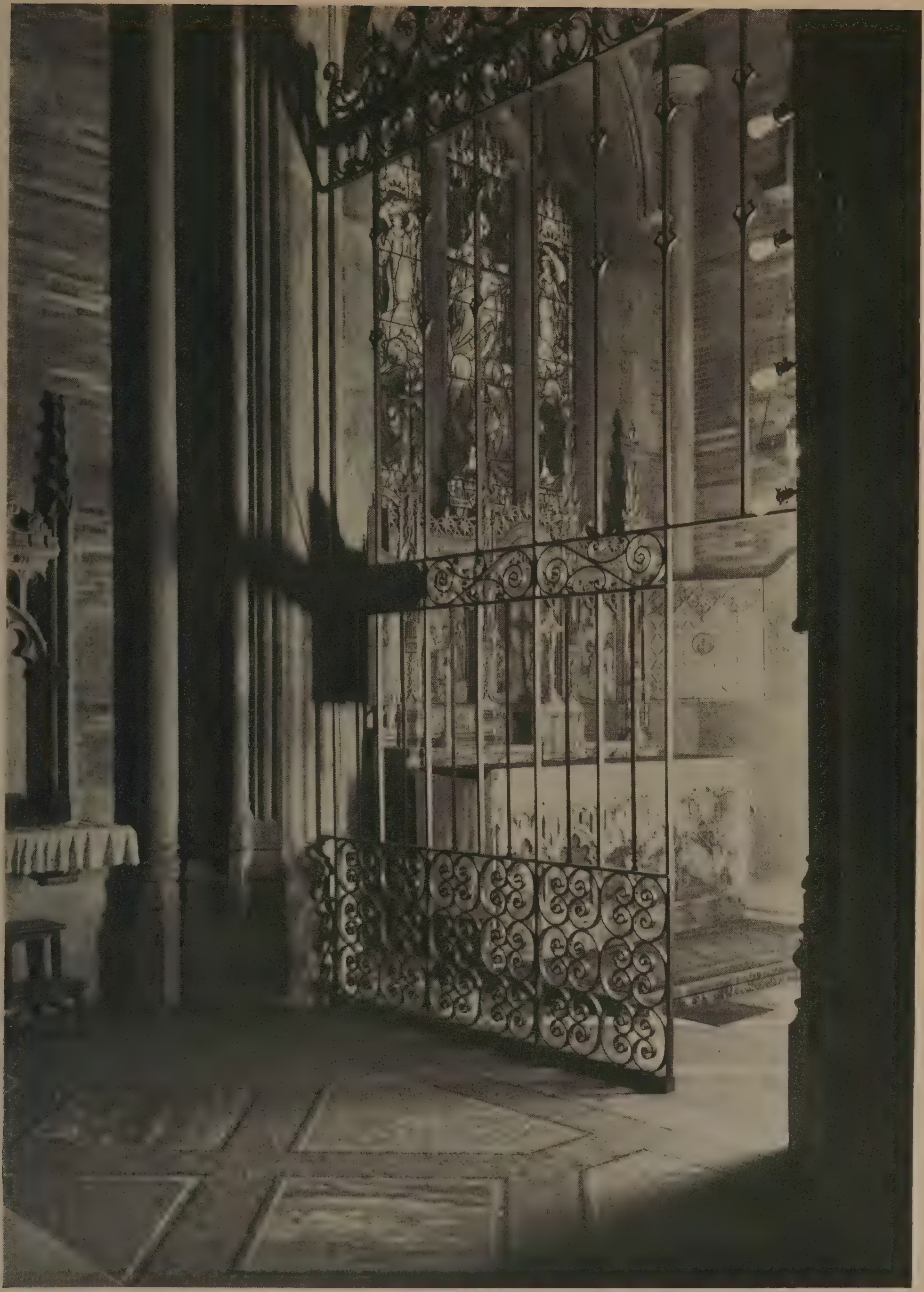
RUTLEY RESTAURANT, NEW YORK CITY
Buchman & Kahn, Architects
Mack, Jenney & Tyler, Decorators



SHRINE, CHURCH OF ST. IGNATIUS, EIGHTY-SEVENTH STREET, NEW YORK
Cram & Ferguson, Architects



SHRINE, CHURCH OF ST. IGNATIUS, EIGHTY-SEVENTH STREET, NEW YORK
Cram & Ferguson, Architects



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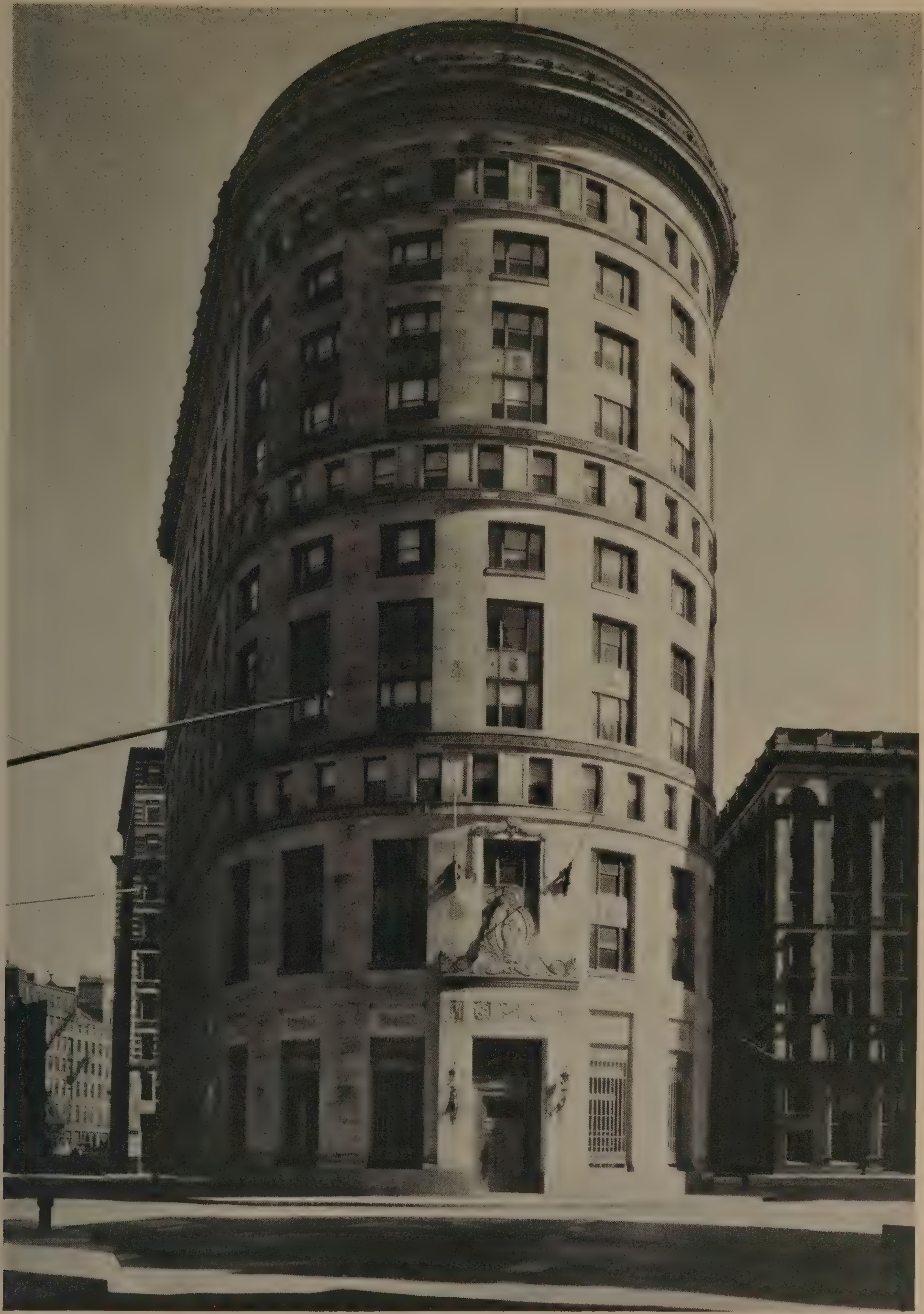
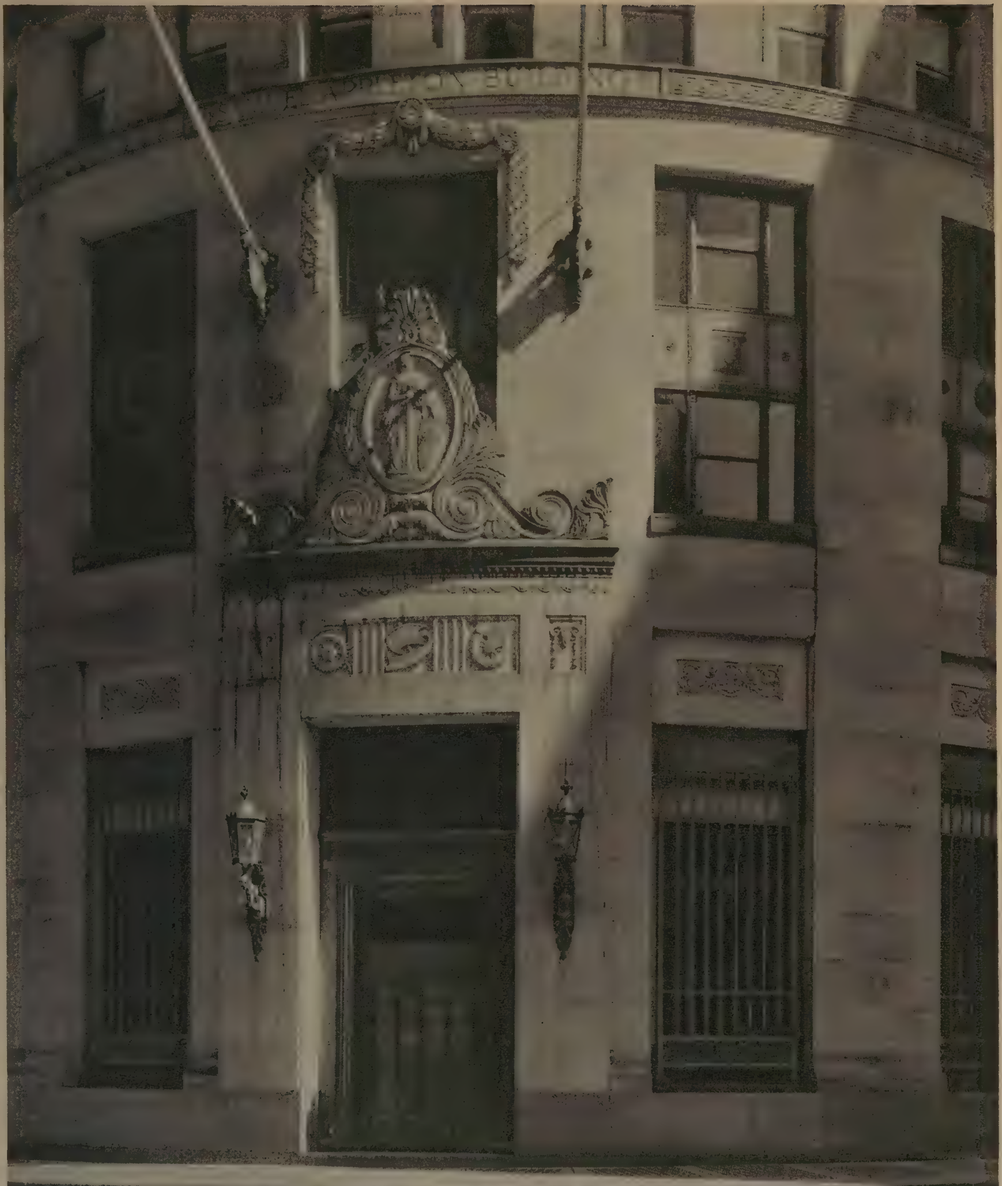
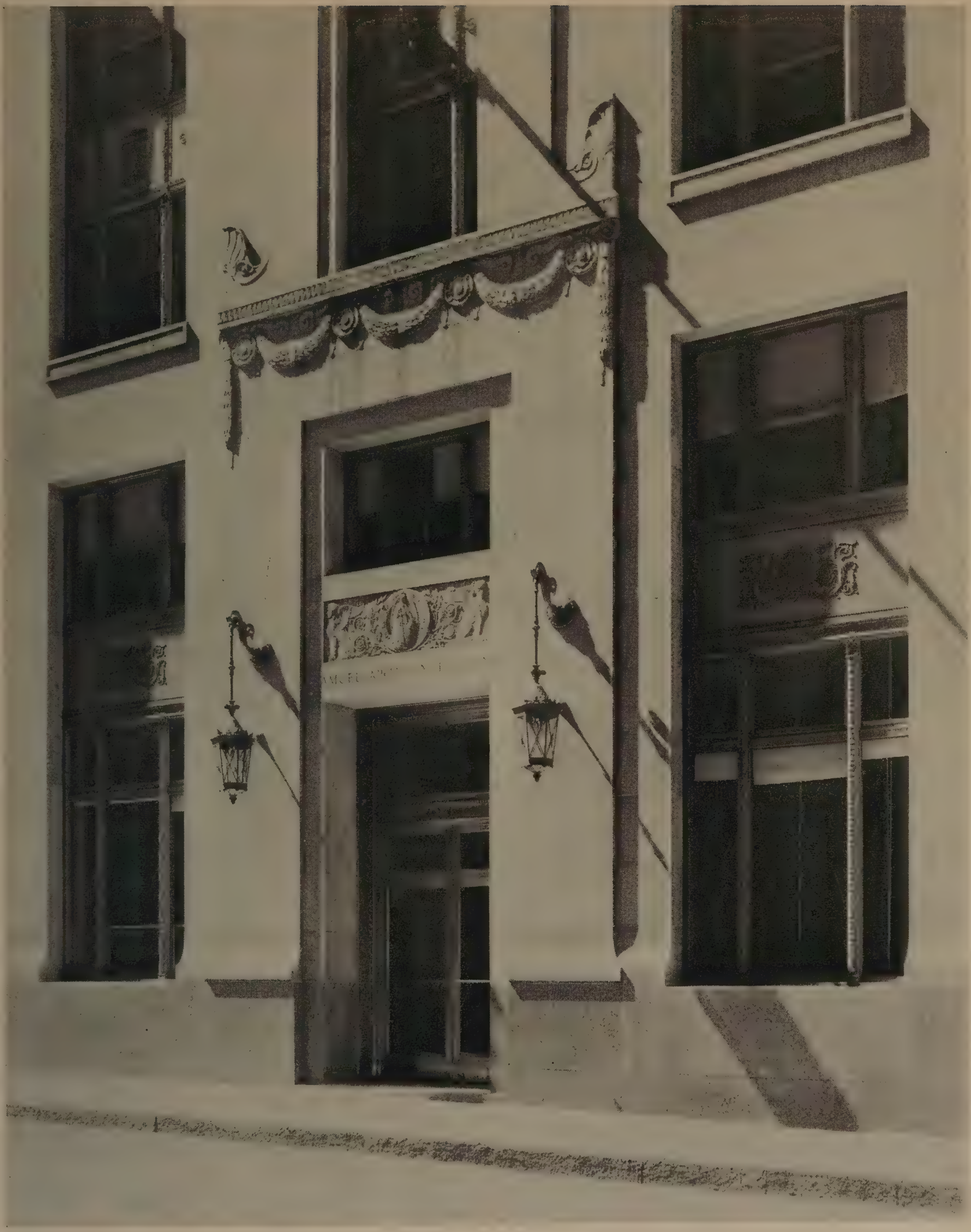
Cram & Ferguson, Architects



SAMUEL APPLETON BUILDING, BOSTON, MASS.
Coolidge, Shepley, Bulfinch & Abbott, Architects



SAMUEL APPLETON BUILDING, BOSTON, MASS.
Coolidge, Shepley, Bulfinch & Abbott, Architects



SAMUEL APPLETON BUILDING, BOSTON, MASS.
Coolidge, Shepley, Bulfinch & Abbott, Architects

EARLY AMERICAN ARCHITECTURE and the ALLIED ARTS.—*A Bibliography*

By

Richard J. Bach

VIII. PERIODICALS (Continued)

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HOWARD VAN DOREN SHAW

May 7, 1869—May 7, 1926

Again the necrology of a noble art, so mysteriously replete in the last two years, has received an illustrious name. First it was Sullivan, that flaming Lucifer who preferred to reign in the Hell of revolt rather than serve in the Heaven of conformity; then Anderson, the quiet, the powerful, who brought the majesty of Imperial Rome to surmount with its vaults and colonnades the turmoil of an American city; then Bacon, who plucked beauty in Tempe and the vales of Arcady and made it bloom again on the banks of the Potomac; then Goodhue, the darling of the Gods, into whose lap, like playthings, were heaped the arts; and now Howard Shaw. They are a glorious company, working, who can deny it? in a greater atelier.

When I see Shaw's work in the ensemble or examine it in particular three qualities are always to be found. Three graces step forth hand in hand: Originality, Taste, Learning.

I remember years ago, in a more or less sophomoric essay on "The Chicago School," impressed by Shaw's originality, I listed his name with much fear and trembling, not of him but of my right to do so, with the other "incroyables" of that forlorn hope. When I called his attention to my temerity he made no objection other than to remark a little dryly, as I remember, that he feared he did not merit the distinction. This originality of his was so tempered by taste and knowledge that it attained at birth the distinction that properly belongs to old age. You didn't have to get used to it to like it. Perhaps one might say of him, "he was the most rebellious of the conservatives and the most conservative of the rebels." After all, his creation of things out of plain air was mostly restricted to detail. Howard Shaw loved detail and he was a great detailer. I have heard him say that no full-size detail ever left his office without his personal O.K. He made an effort, as Goodhue did in his latter years, to get away from detail. I think some such self-imposed penance was upon him when he achieved the chastity of the McKinlock court of the Art Institute. But the Goodman theatre, his last work, shows the same loving "flair" for an untried moulding (note the curious triglyphs in the lobby) and for the same whimsical courage in defying the law (see the variously sized and colored busts in the frieze of the same building). The Gothic style, with her love of originality and creative genius, would have opened her arms to him and it seems to me unfortunate that on so few occasions did he accept so alluring an invitation. In his collaboration with Cram in the Fourth Presbyterian Church and in the University Church of the Disciples of Christ, both in Chicago, his work is of the highest quality, not only in originality, but in that hardest of all things to achieve, the feeling of inevitability that the work of the Moyen Age possesses. Old Arnolfo himself couldn't have done better or for that matter as well with the masterly balconies and windows that grace the Donnelley printing building; here the spirit and the art of the guilds live again.

Perhaps we should not give Howard Shaw too much credit for his impeccable taste. Born, brought up and living in a community and among a circle of friends where the best that breeding, education and wealth can produce, was his pleasant portion in life, and vulgarity in his work would have been inexcusable. Furthermore, his clients were, for the greater part, people who had been blessed in like manner, so that the lack of money to incarnate the dream, a sordid lack that clips the wings of many an architect, was not with him an ever present shadow; but, on the other hand, he rose above the dangers that are present in such an apparently ideal situation. The point of view of people who count a beautiful house along with a debutante daughter, a Rolls-Royce and a membership in an unattainable club, a part of the accoutre-

Howard Shaw

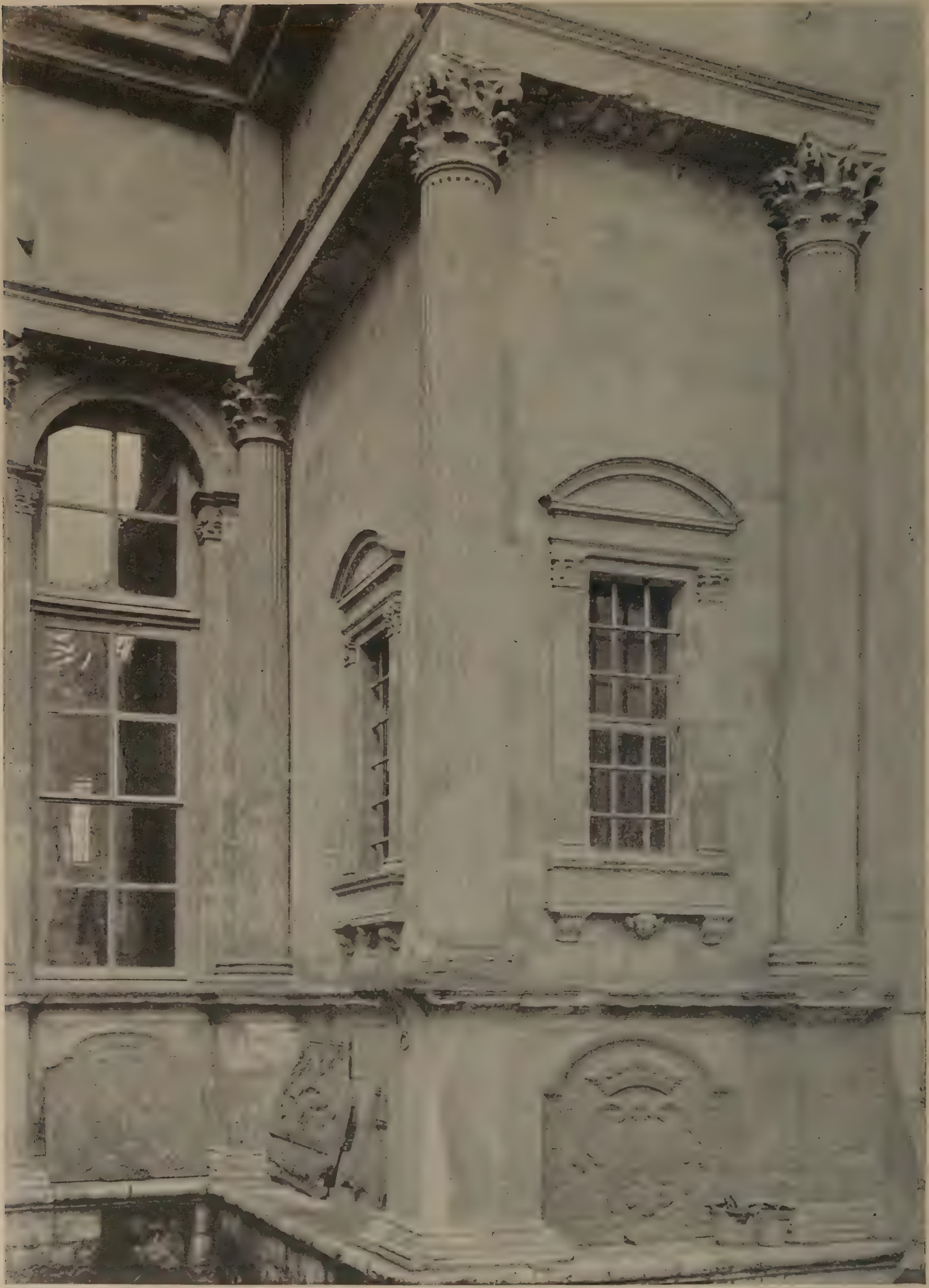
From a bust in bronze made by Mr. Shaw's daughter, Sylvia Shaw Judson ments of social conquest; the know-it-all attitude of those who have sipped of the Pierian Spring only as it dribbles down the Rue de la Paix and Park Avenue; the dictatorship, so easily assumed by those accustomed to commanding valets and chauffeurs and, worse still, the *precieuse* and provincial attitude of those to whom beauty exists only in a ridiculous Ming horse or in a dilapidated Regence fauteuil —all these, to judge from his work, he must have combated and vanquished. I never can see, for instance, anything in Howard Shaw's residences but that which he decided to give his clients. Apparently he disliked French architecture, and what untold battles he must have fought when the spectral hands of the creators of Fontainebleau and Versailles reached across the sea to dominate our architectural modes. The same can be said of other architectural waves; the Italian villa, the Adam interior, the Norman cottage, all beat about him, but he continued to give his clients what he thought, and not they, constituted good architecture and good taste.

This does not mean that Howard Shaw saw nothing to emulate in the work of other countries or other men. Motives from the Georgian he constantly used. The reversed curves and plaques of the men of Munich and Vienna continually intrigued him; the Austrian influence, for instance, is very evident in the village square of Lake Forest. Perhaps the architect to whom he owed most is Sir Edwin Lutyens, for in composition, as well as ornament, is the influence of the creator of the Cenotaph often discernible. He greatly admired the work of Platt, and, in a delightful morning spent with him in the Freer gallery, he was unstinted in his praise of that little masterpiece. Undoubtedly the Freer gallery served more or less as a model for McKinlock court, and in this, I think, Mr. Shaw erred, as the polished perfection of his distinguished compeer was altogether too austere and modest a habit for the wayward Shavian fancy.

Underneath the native talent and brilliant environment was the firm foundation of thorough knowledge. A graduate of Yale in the class of 1890, and of the Massachusetts Institute of Technology in 1893, he supplemented this liberal and technical foundation with numerous trips to the Orient and Occident. As the servant of the mother of the arts he deemed it his duty or pleasure to become intimately acquainted with her children. Consequently, through his long service as a trustee of the Art Institute and a member of its Art Committee, and as a director of the Ferguson Fund for Sculpture, sculpture and painting were his constant companions; and at the Cliff Dwellers, of which society he was a devoted member, one heard his humorous, kindly voice raised at odd moments in those discussions of every subject of human knowledge or speculation, constantly on the air within this band of Humanists.

Against the background of so much talent, so much knowledge, and so much distinguished success it is especially significant to view Howard Shaw's modesty and simplicity. His own social and home life in beautiful Ragdale, if we had a right to describe it, would be the most eloquent example. He did his duty conscientiously to the State and to his profession, but he never sought preferment and, so far as I know, he never sought a job. I never heard him make a speech and I never read anything of his but once and that was delicious. If I wanted to find him at a convention of the Institute, of which he was a Fellow, I always looked for him in the back row. Nevertheless, the world beat a track to his retreat, gave him great commissions, took from him inspiration and example, gave him positions of honor and trust, and pinned upon his breast, as he departed for the greater work, the gold medal of the Institute.

THOMAS E. TALLMADGE, F.A.I.A.



Detail of Courtyard
HOUSE OF DIANE DE POITIERS, ORLÉANS

The FARMSTEADS and SMALL MANORS OF FRANCE

By

Harold Donaldson Eberlein, Roger Wearne Ramsdell
and Leigh Hill French, Jr

VIII. La Maison de Diane de Poitiers, Orléans

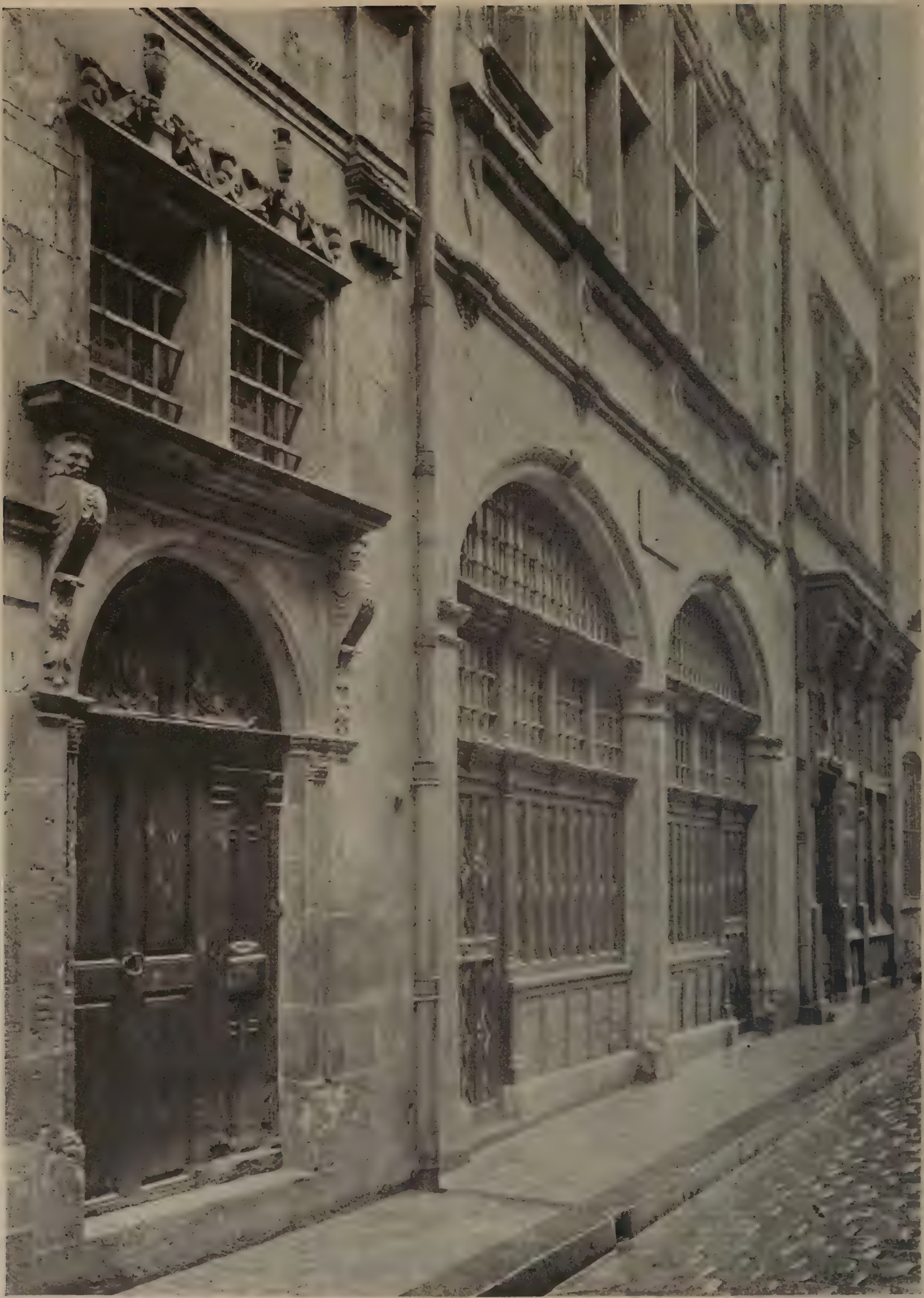
The so-called house of Diane de Poitiers, at Orléans, is more correctly though not so popularly known as the Hôtel de Farville or Cabut. As it is almost universally known as the House of Diane de Poitiers, however, even in Orléans, we may as well continue to call it by that name. It was built in 1542 by Michael Adam, of Jargeau, and is a beautiful example of French Renaissance domestic architecture. It is now carefully preserved as an historical museum and contains an admirable collection of French wood-carving, wrought ironwork and examples of the other allied arts, produced at the height of Renaissance excellence.

The house is built of beautifully dressed ashlar of limestone, although the walls in a portion of the courtyard are of brick, the dressings being carried out in limestone.

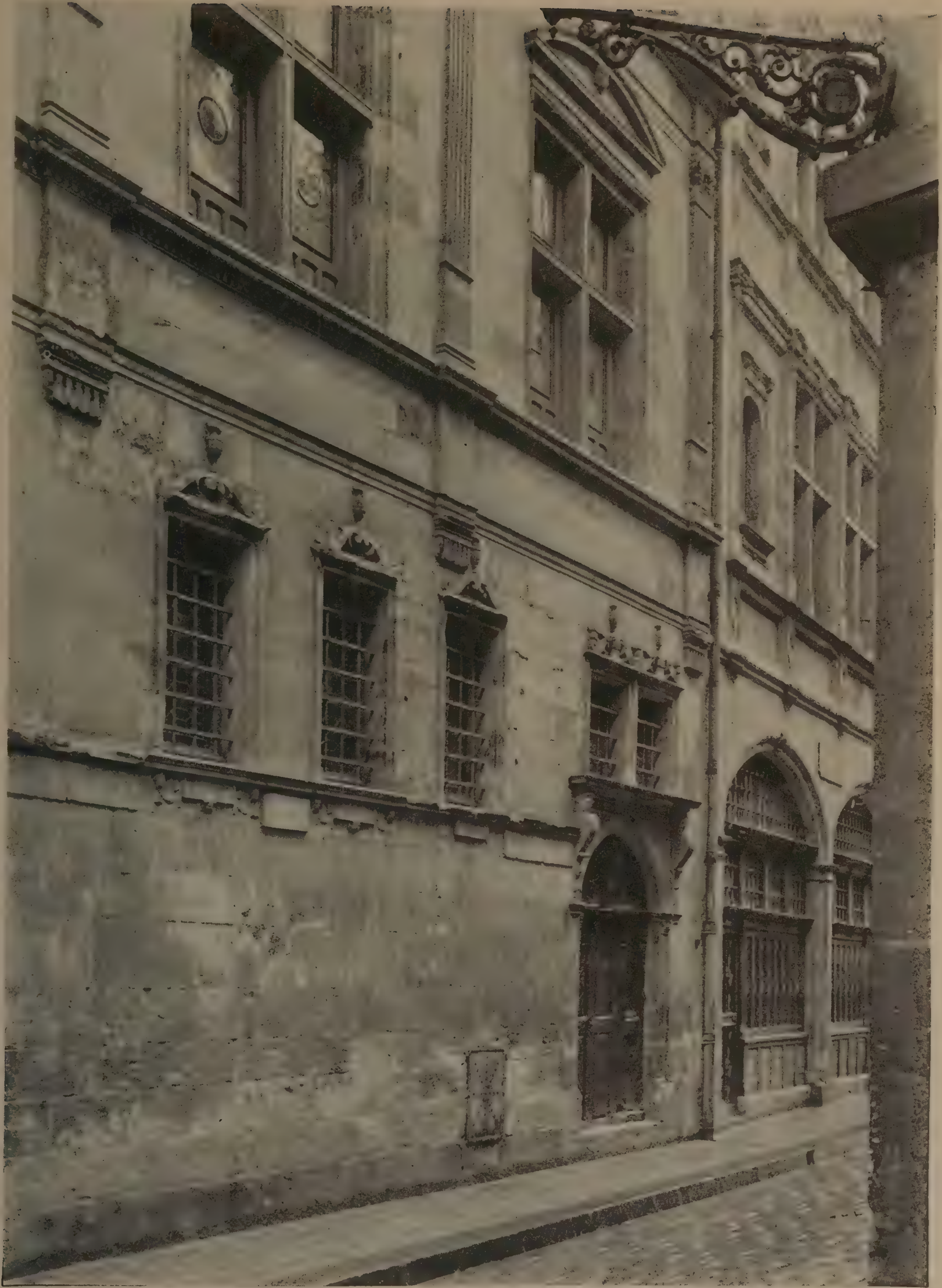
All the exterior stonework details are exquisitely wrought and their fashion and execution not only supply a valuable commentary upon the methods of contemporary French assimilation of Italian Renaissance precedents, but also show the source and prototypes whence were derived the various *motifs* that recur again and again in farmhouses and small manors in the neighboring country districts. Thus we can readily trace the immediate transmission of style, and the process of adaptation and simplification, from the nearest provincial center.

To see this process at work we need look no farther than the doorway of the little cottage at Saint Ay (page 80), published in company with the more exalted House of Diane de Poitiers. Scores of these little houses in the neighborhood of Orléans display a degree of urbanity that was certainly never derived from purely rustic and vernacular precedents. Oftentimes the humblest farmhouses, although their present condition can scarcely be considered inviting, show traces that unmistakably point to some potent refining influence that permeated the whole region. It is this quality that makes the country round about Orléans such a rich and satisfactory hunting ground for the architectural student who is willing, in some places, to shut his eyes to the abominations of tin verandahs, cheap metal shutters, panes of garish-colored nineteenth century glass, and a good deal of chronic squalor. Such little houses as the small farmstead at Sablon, near Orléans, (pages 83, 84 and 86), though not at first sight especially alluring, often yield rewards not to be despised upon close investigation. The door fittings and other wrought iron hardware to be found in this region will especially repay more than merely cursory notice. Brick and tile details, also, are worth looking into.

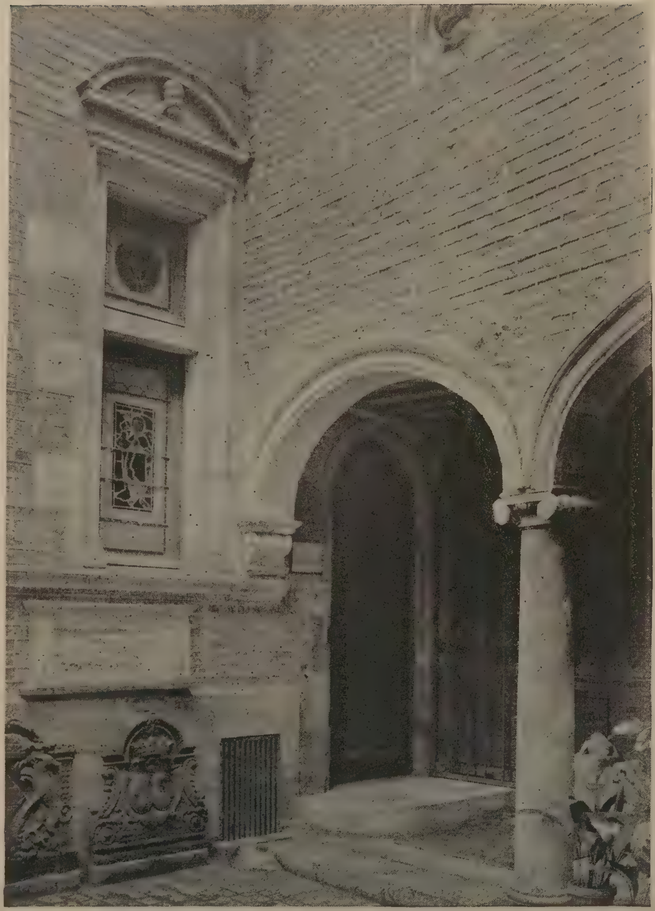
The more substantial houses of the vicinity, such as the house at Sablon, to be published in conjunction with Le Grand Moulin in the August issue, exemplify the eighteenth century fruition of chaste expression, in large measure traceable to the quiet influence of the architectural ideals implanted and cherished at Orléans, an influence that has continued to work through the centuries and has affected all local types of houses from the least to the greatest.



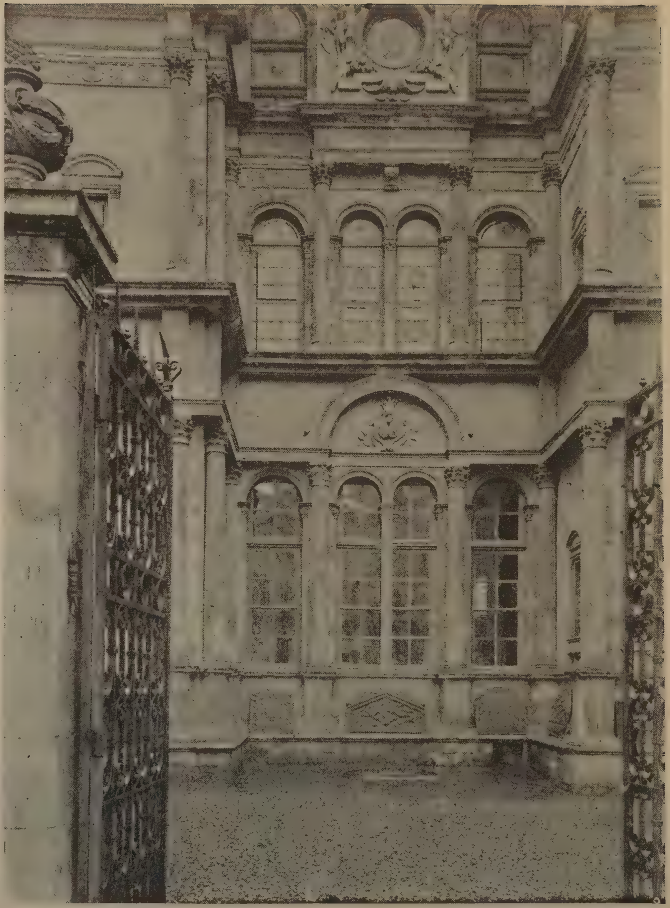
Street Door
HOUSE OF DIANE DE POITIERS, ORLÉANS



Street Front Detail
HOUSE OF DIANE DE POITIERS, ORLÉANS

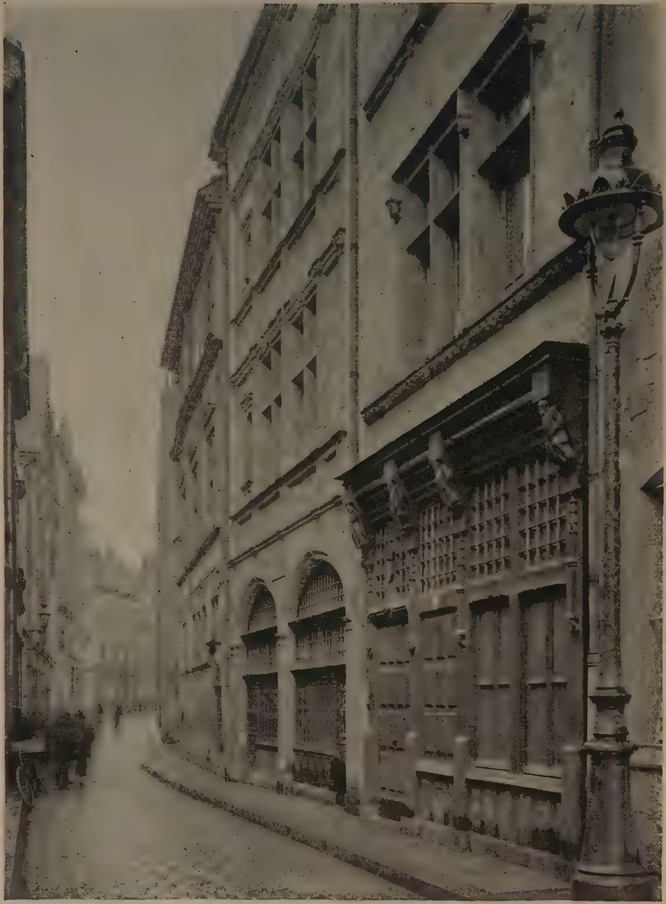


Loggia Detail

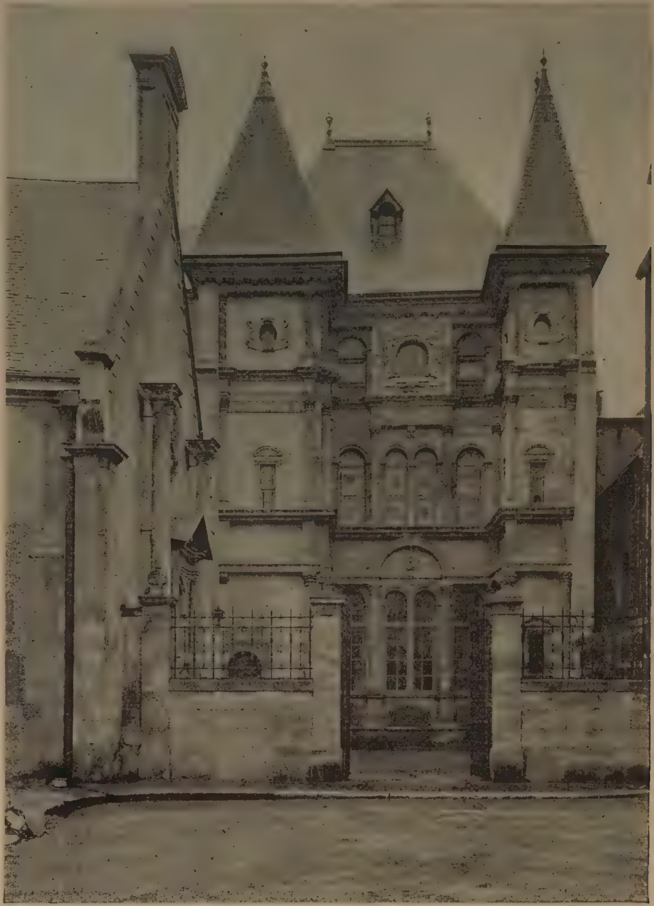


Detail in Court

HOUSE OF DIANE DE POITIERS, ORLÉANS

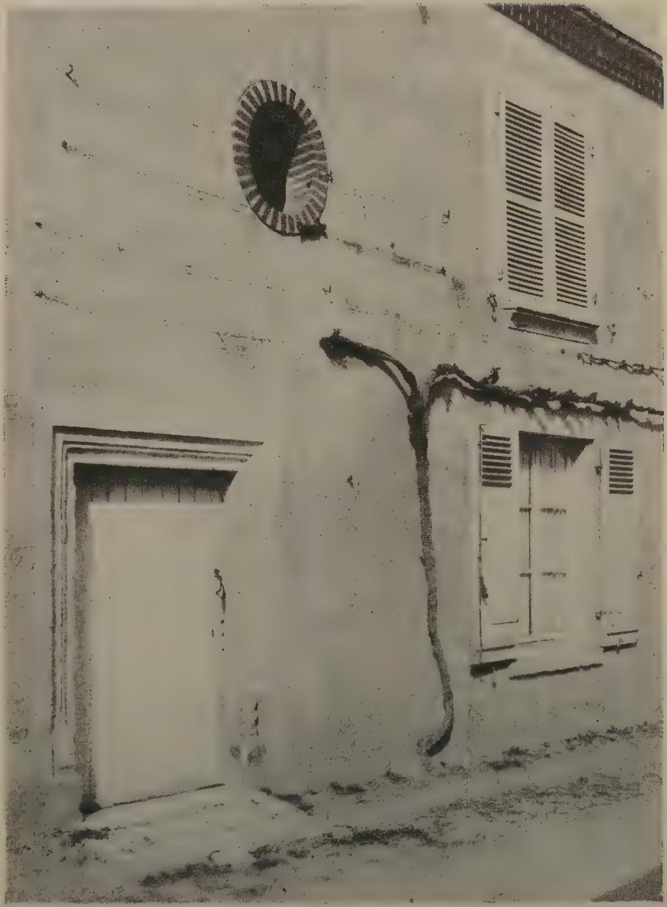


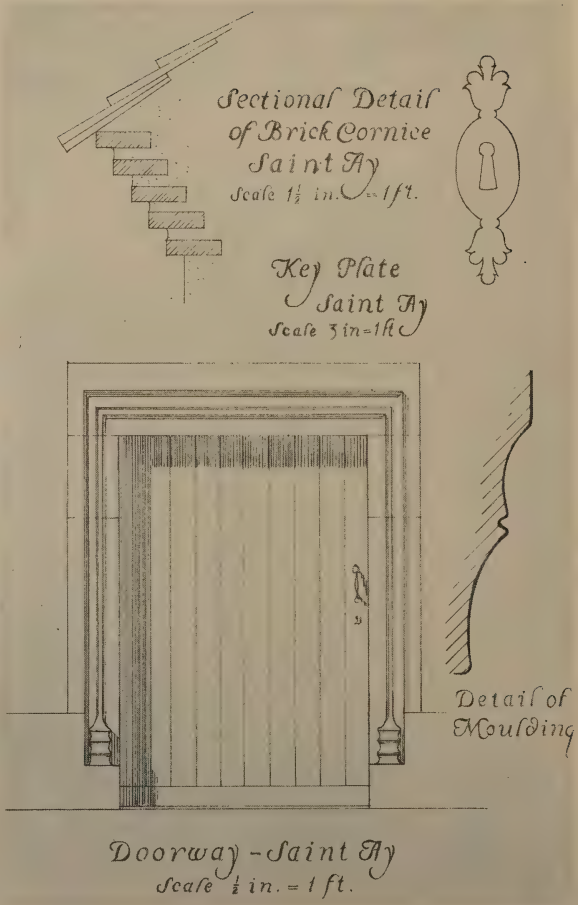
Street Front

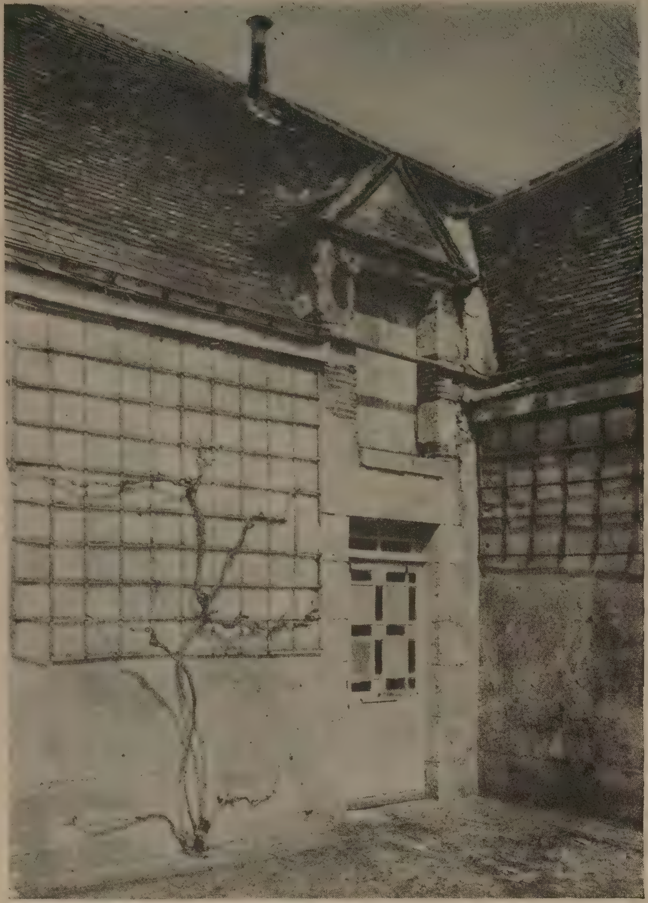


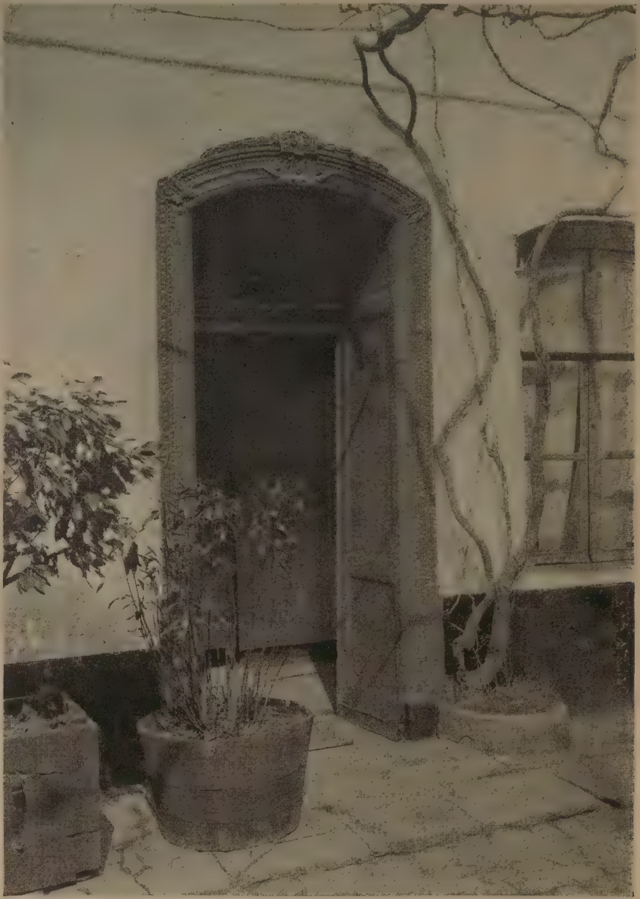
East Courtyard

HOUSE OF DIANE DE POITIERS, ORLÉANS



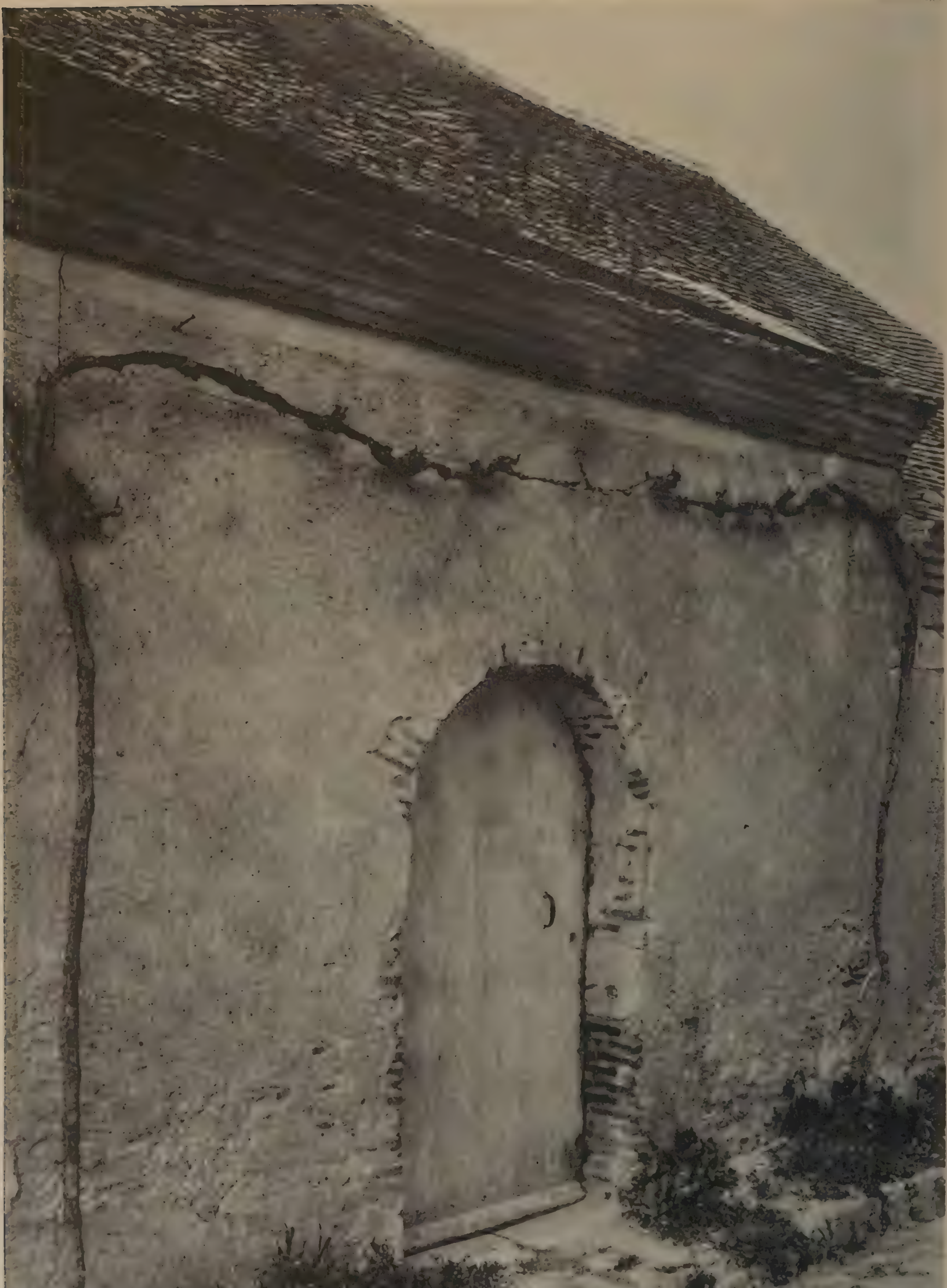

Sectional Detail
of Brick Cornice
Saint Ay
Scale 1½ in. = 1 ft.
Key Plate
Saint Ay
Scale 3 in = 1 ft
Detail of
Moulding
Doorway - Saint Ay
Scale ½ in. = 1 ft.



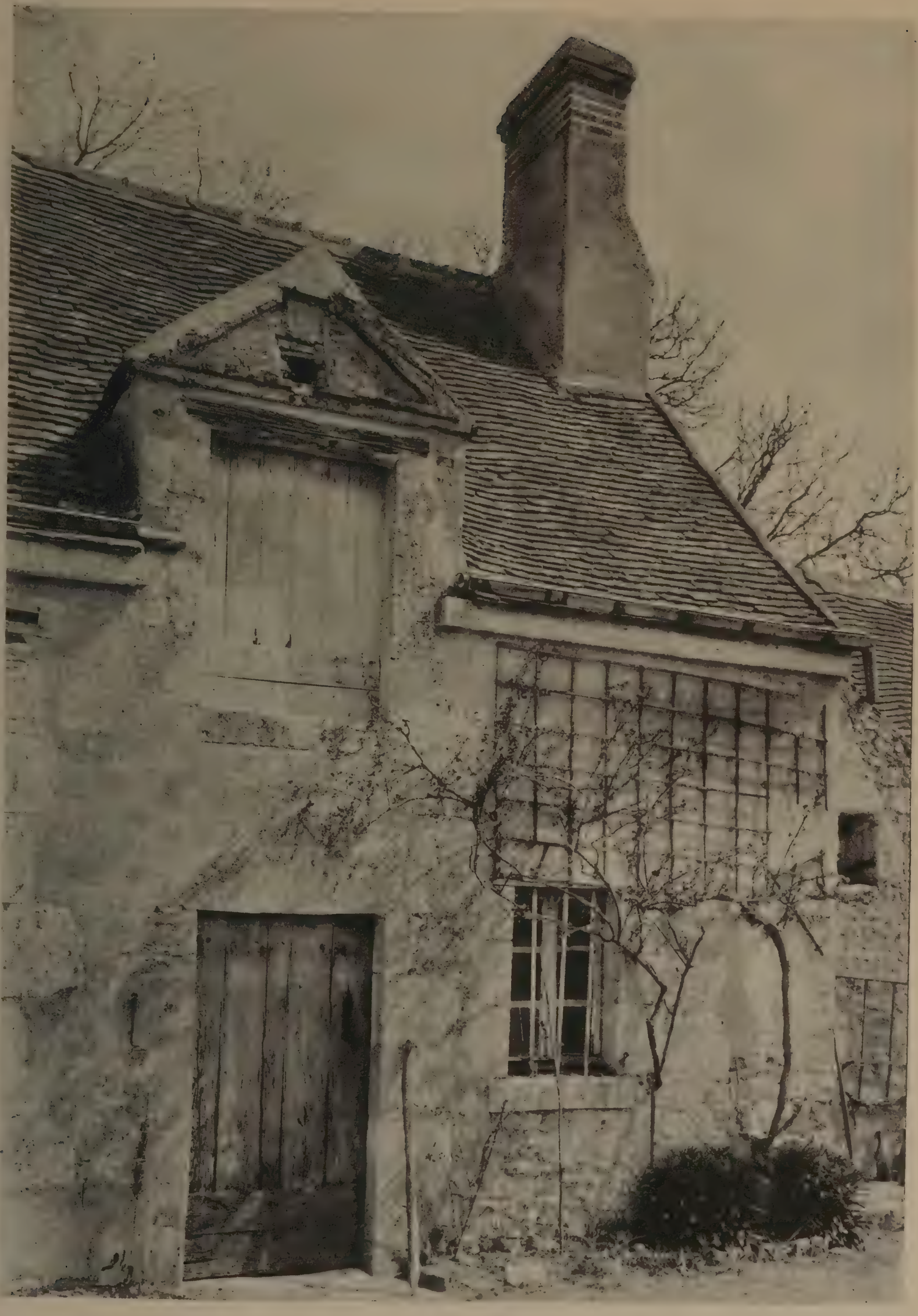


DOOR AND DORMER DETAIL, SABLON

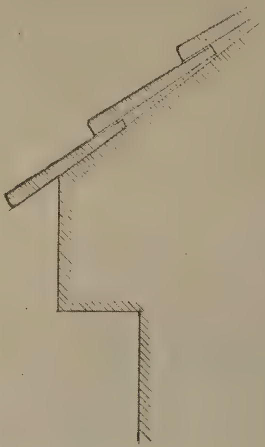
DOORWAY IN COURTYARD, MONTREUIL



STREET DOOR AND CORNICE—COTTAGE AT ST. AY



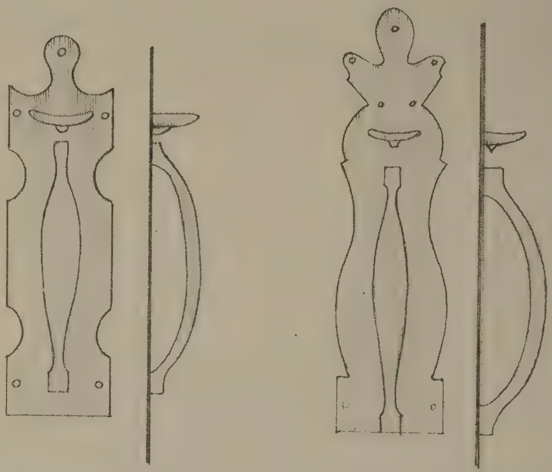
DOOR AND DORMER DETAIL—SMALL FARM AT SABLON



Detail of Cornice

0 1 2 3 4 5 6 ins.

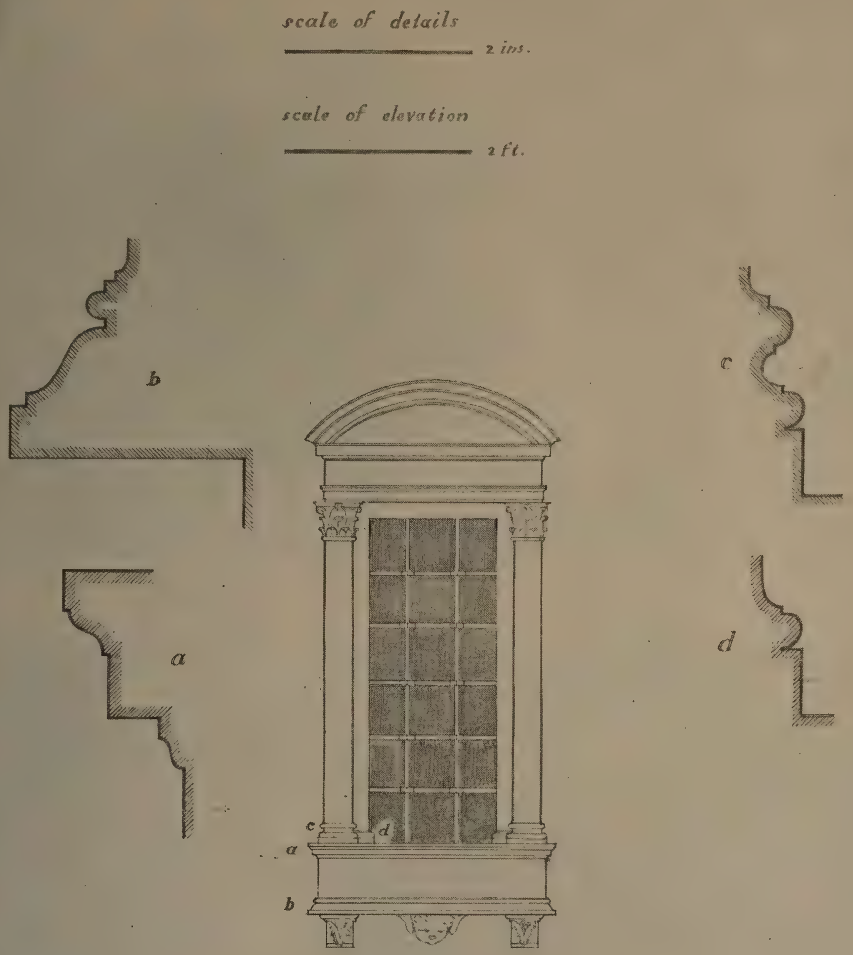
SCALE.



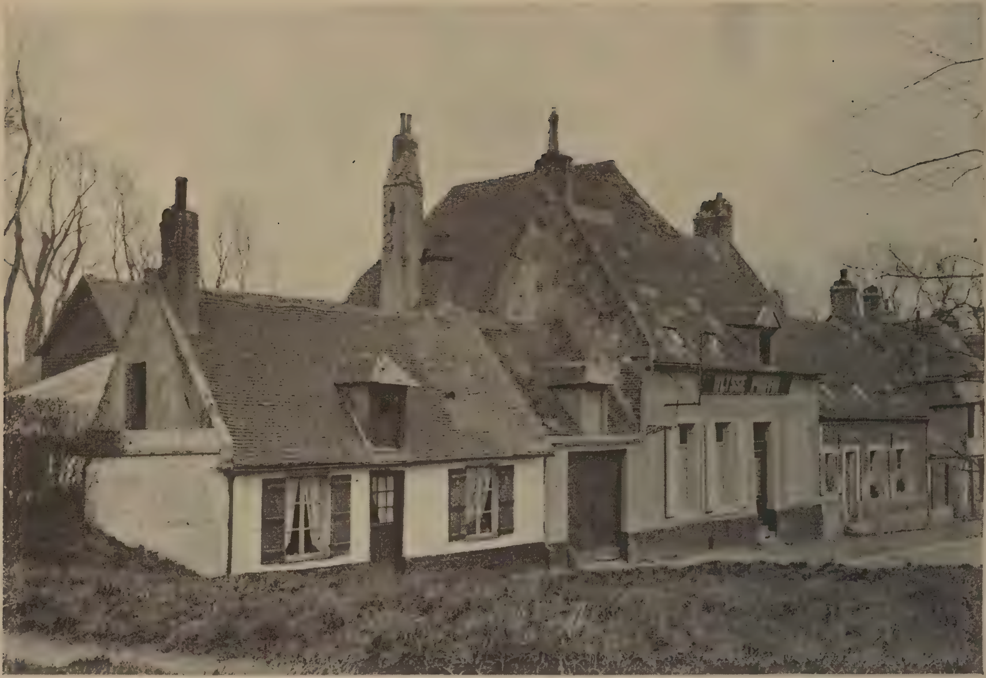
Wrought Iron Latches.

HALF FULL SIZE.

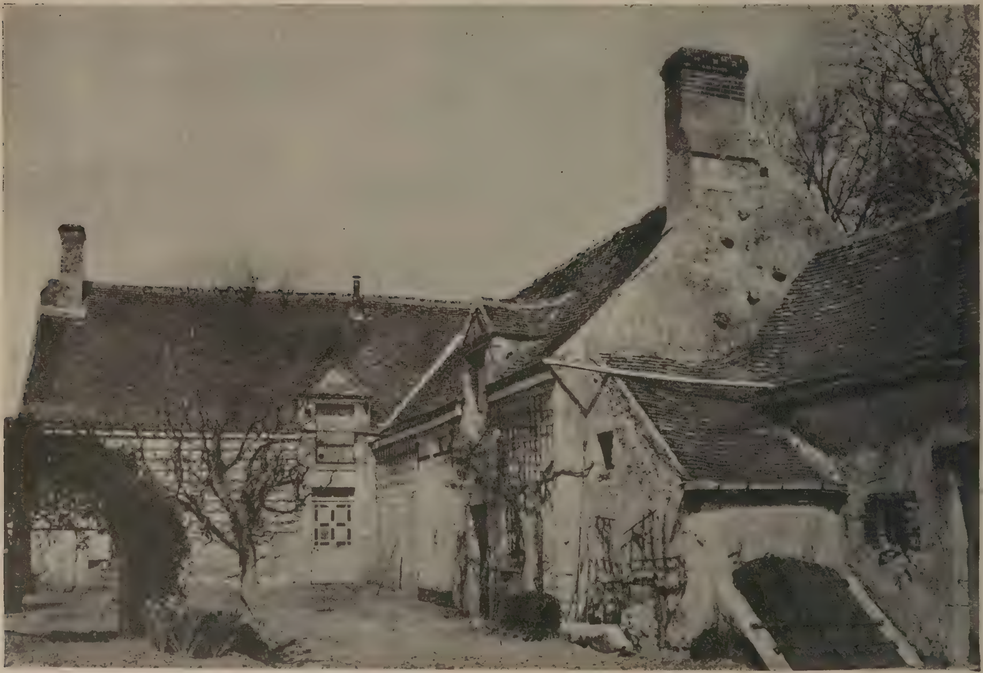
Sablon near Orléans.



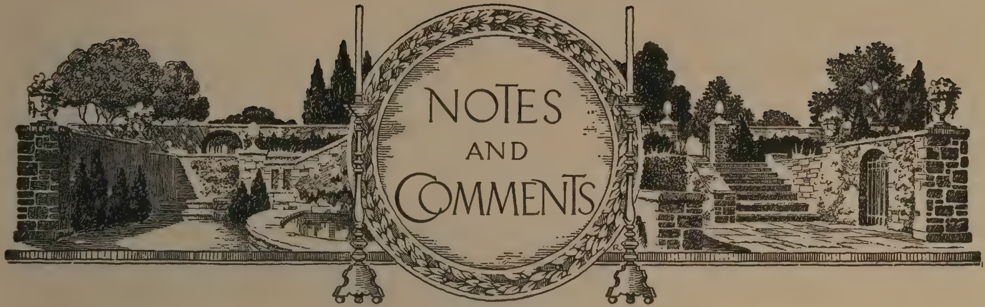
Window
House of Diane de Poitiers, Orléans



COTTAGES ON RAMPARTS, MONTREUIL



COURTYARD, SMALL FARM AT SABLON



NOTES AND COMMENTS

Guilding Principles

The unveiling of a bust to Augustus Saint Gaudens in the Hall of Fame, brought vividly to my memory an eminent group of artists, architects, sculptors, painters, who worked together for the public good, persistently striving for the best.

You could not think of Saint Gaudens the sculptor without remembering Chas. F. McKim, the architect, F. D. Millet, the painter, and Richard Watson Gilder, the poet. Their team work for the Fine Arts was exceptional; while each excelled in his branch, together they did notable public service.

It is profitable for us to consider the reasons for their success, the influence they exercised in the fine arts, and the lasting service they performed for the country in the monumental character of their work.

Their influence persists. If we take a list of the prominent sculptors and architects of to-day we will find that they were either directly under Saint Gaudens or McKim, or else they were influenced by their example.

The name of Saint Gaudens recalls the successful efforts of that band of artists in the Columbian Exposition, Chicago, more than a generation past. This influence on art, which was nationwide, persists today. Let us thank the executive ability of D. H. Burnham, the guiding spirit of Chas. F. McKim in architecture, Augustus Saint Gaudens in sculpture and Frank Millet in decoration.

Saint Gaudens' name recalls the great work of the Washington Park Commission, which not only presented for the first time by good team work a practical plan for the artistic treatment of city development, but gave to this country the most artistic scheme the world has known for the development of the Nation's capital city.

Saint Gaudens by his sculpture, framed in the setting designed by Stanford White and Charles F. McKim, has contributed largely to the patriotic expression of the country's ideals. He depicts, with technical skill, Shaw, Farragut, Sherman and Lincoln, not only giving their physical aspect, but expressing in a wonderful way their individual spirituality. He endows them with the soul by which they were inspired.

When Roosevelt was seeking the most talented man, to give the United States an artistic coin, he selected Augustus Saint Gaudens, who set an example for future designers in the low relief models which he made for our coinage.

It would be profitable, I believe, for the present generation to recall or consider why the labors of that group of men had such far reaching and persistent results for good. While we must believe they had greater inborn genius than had been granted to others, they had, in addition, other qualities which we feel contributed largely to their success and to their usefulness.

They had an euthusiastic, absorbing love of their art; they had untiring energy and persistence; they were not deterred by failures or down-hearted because of mishaps; they fought for and obtained the best.

No one of this group was carried away by the wild wave of bizarre self expression which began with sculpture, is producing wild excesses in painting and in architecture, tends toward the Tower of Babel effects. Let us hope the results will not be as demoralizing.

These men never strove to attract attention by producing monstrosities, by mutilations, malformations, or crazy compositions. I feel confident that Saint Gaudens, the exponent of sane sculpture, will be remembered when Rodin, the exponent of eccentricity, will be forgotten.

This American group sought only the most artistic solution. No labor was great enough to deter them, no barrier strong enough to bar them from their object. It will be well for the country if this spirit survives in the present generation.

GLENN BROWN.

The Art in Industry Problem

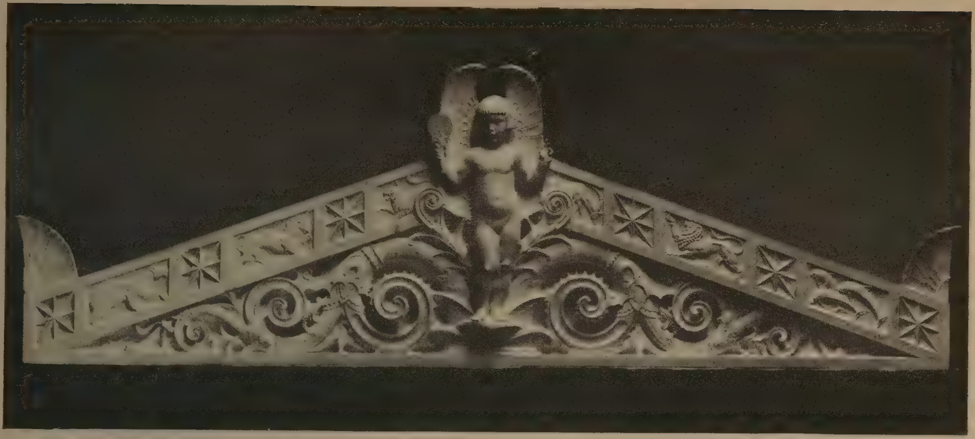
Few subjects appertaining to the practice of the arts have been so much exploited of recent years as the artistic development of American industries. Committees of manufacturers associations, societies under the patronage of ladies with wealth and gift-shop standards, and semi-official groups have expended unstinted verbal energy, directed to stimulating the producer to artistic achievement. Parties have been organized at which he had the privilege of meeting department store buyers; in fact, no stone in view has been left unturned. Commercial designers, school teachers, and the public at large have been exhorted and cajoled. But one group of individuals has escaped, namely, the artists. It was doubtless assumed that the long-standing antagonism of profession to trade is still rampant, and that any progressive movement in the artistic departments of industries must be initiated outside the atmosphere of the studio.

The tendency towards more decorative forms of expression which has invaded the fine arts, might have provided these well-meaning individuals with a subject for cogitation; but unfortunately this change in artistic direction is occuring outside their sphere of observation and contact. They do not stand alone amidst misconstrued signs; exponents of the fine arts who are gifted with the decorative sense might advantageously turn an eye to industries which could furnish them with welcome revenue, and opportunities for distinguished service.

Up to the present, the most marked improvement in the artistic manipulation of substance is noticeable in those trades which have contact with the practice of architecture, and when we see the field of interior decoration entered with professional credentials, we may expect a still wider sphere for cultural influence in the industries. The fine decorative hangings which James Monroe Hewlett has designed and executed, reveal an ornamental content which does not at present exist in the work of any industrial textile designer; the complete decorative adequacy of Yellin's work is in great measure due to the close contact which he cultivates with each architect for whom he works. It would appear that the desired results might be realized, could the commercial designer with his technical experience, take the artist's viewpoint of effect; the artist, on the other hand might acquire sufficient technical knowledge to express his ideas, and state his ideals, in terms of substance and process. Such technique is more easily acquired than artistry; for this reason we feel that external pressure has been misdirected, and opportunity and inducement might be extended to those artists who sense a capacity for creation of an industrial character; this is no less important than the subsidising of abstract research. Enterprising manufacturers have frequently made the experiment of engaging a well-known artist to make models or designs, but this has almost invariably proven disastrous; the latter felt it compulsory to play down to a public, and the former imagined that the consciousness of technical restriction would be adverse to imaginative effort.

Our chief justification for optimism is the extinction of the influence from the French realistic school of the 90's, and the growing conviction in the art patron that, even when a picture has no decorative pretension, it should nevertheless perform a decorative function wherever it is hung. The growing taste for mural painting during recent years, and the prominent place which that branch of the painter's calling has acquired, is attracting many painters and illustrators to that particular field, with most promising results. With sculpture the progress in the decorative direction is most marked, mainly due to the influence of the more formal stylistic periods, and the employment of sculpture in architectural and monumental schemes.

We reproduce a model for a bronze lintel by Paul Jennewein, Fellow of the School of Rome, and one of the most prominent among the new generation. Throughout this exquisite design we find form and composition entirely subjected to meet a prescribed requirement, dictated by an architectonic sense of fitness; in every detail the character of the substance to be used has controlled contrivance of form, and technical methods in reproduction have never been out of mind: the subjection of fancy to practical means and purposes, which characterizes all true craftsmen, has actuated this sculptor throughout the creation of a distinguished work. That which strikes us as most significant is, that this bronze frame to a doorway has been taken as seriously as any design for a purely academic purpose. When we see architects allotting work of this de-



BRONZE PEDIMENT TO MUSEUM DOORWAY
Designed and modelled by Paul Jennewein
Zantzinger, Borie & Medary, Architects

scription to a sculptor of such calibre, instead of letting a bronze contract to a manufacturer with the obligation to furnish designs and models, and we find the sculptor regarding a simple architectural detail as an opportunity for concentrating his best effort, the day is not far off when the arts and trades will meet in coöperative effort.

LÉON V. SOLON.

The Boston Architectural Exhibition, 1926

The Boston Architectural Exhibition this year, given as usual under the auspices of the Boston Society of Architects and the Boston Architectural Club at the Rogers Building of the Massachusetts Institute of Technology on Boylston Street, would seem, from the point of view of both the profession and the public, to have been one of the most successful of recent years.

In the first place the arrangement was simple and consistent, the subjects grouping apparently naturally into related material. Next, fewer miscellaneous buildings, and also fewer uninteresting frames or drawings were shown than in past years' exhibitions. Finally, the whole exhibit was restricted to architectural material, there being no student work nor landscape pictures this year, with the result that the whole effect of the hall was simpler and better in its general aspect.

It was perhaps to be regretted that so few of the practicing architects of the city seemed to be represented,—yet it was this that probably made it possible to hang all the material along two lines only, so that no pictures were too high and none too low to be easily studied. This also was helped by the fact that most of the photographic views were of large size, simply mounted or framed and often grouped upon a single large mat,—all this added to the simplicity and effectiveness of the whole showing.

Among the larger subjects were the Vanderbilt University Medical School and Hospital at Nashville, Tennessee; All Souls' Church at Washington, by Coolidge and Shattuck; Trinity Church, Springfield; the new Universalist Church on the borders of the Fenway in Boston by Allen & Collens; and the group of buildings shown by Maginnis and Walsh, including the St. Paul Cathedral Sacristy in Minnesota and the new building for Boston College in Brookline that was given the Harleston Parker gold medal for excellence by the Society of Architects.

Several groups of "invited works," including work by Delano and Aldrich, viz., the Smith College Music Building, Valeria House, New York, and Vincent Astor's House on Long Island; John Russell Pope's New York State Roosevelt Memorial, and some charming renderings from his office including the Syracuse Memorial Hospital, in collaboration with Dwight James Baum; and, finally, a series of photographs of "Viscaya," Miami, by Paul Chalfin and J. Burrall Hoffman added, as usual, a more cosmopolitan aspect to the exhibit.

Cram & Ferguson showed some studies and details of St. John the Divine, with a model of the West Front, a new Chapel for the Choate School, and a group of photographs of some new residential halls at Exeter. Other dormitory subjects were for Tufts College at Medford, by Andrews, Jones, Biscoe and Whitmore, the same firm also showing a design for one of the new Charles River bridges. The Saltonstall Memorial Gymnasium at Milton Academy, and a house in Milton and another at Haverford, Pa. were displayed by Shepard & Stearns; and another College dormitory, at Elmira, N. Y. was by Coolidge, Shepley, Bulfinch & Abbott.

Among office building designs were the new Statler Hotel and Office Building in Boston by George B. Post, shown in two lithographic renderings; some Montreal buildings by Brown & Vallance; others in Boston and Baltimore by Parker, Thomas & Rice; and the new Appleton Building in Boston.

The design for a large hospital at Springfield by Stevens & Lee was shown and several views of details of the new Metropolitan Theatre recently opened in Boston.

Frohman, Robb & Little exhibited churches at Concord and Tampa, and some English type residences at Chestnut Hill, Brookline and Gloucester. Some refined Colonial and English house interiors by Howe, Manning & Almy in Cambridge and Brookline were shown, and some attractive housing dwellings for the Yale and Towne Co. by Perry, Shaw & Hepburn at Stamford, Conn. The interiors of the King Hooper Shop on Chestnut St. by Dana Somes, and some stores in Waban by Edward B. Stratton represented the smaller type of picturesque or suburban designs. Kilham, Hopkins & Greeley showed some colored sketches of small bank or store buildings. Some photographs and drawings of West Newton brick dwellings, and a sketch for a Suburban Golf Club were exhibited by Frank Chouteau Brown.

There were also two or three groups showing Spanish types of design, one near St. Petersburg, Florida, by Ritchie, Parsons and Taylor, including the Jungle Country Club and several dwellings; while Parsons and Wait showed other sketches for houses at Mountain Lake in Florida.

A water color of the design for a hotel for the corner of Arlington and Newbury streets by Strickland, Blodget & Law was given a prominent place in the hall, partly from the interest of its rendering by M. Jacques Carlu, largely for its interest of design, but probably also from the public interest that has been aroused by the added height allowed for this structure in giving it five stories more than granted by the recent law of zoning restrictions. This additional height was permitted by the ignorance of local authorities and courts of the true meaning and power of zoning legislation. It is likely to prove an unfortunate precedent locally—and perhaps even in some other cities—where the newly adopted laws have been as loosely drawn as was the case in the Boston code.

All in all, the best and most interesting exhibition that has been held in Boston for several years.

New York University Forms a "Division of Architecture"

The new Division of Architecture organized by the New York University promises to fill a long-felt want to students of architecture in this city. The general policy of the new division is similar to that of the Ecole des Beaux Arts in Paris and it aims to provide complete training for those students of architecture who are unable to spend five or six years in college.

The arrangements made by the Department of Fine Arts with regard to the location of the classes (East Forty-Second Street district) and the time (late afternoon and evening) will doubtless prove of immense benefit to hundreds of draughtsmen employed in New York.

Direction of the new division will be under Prof. E. Raymond Bossange, for eight years Dean of the College of Fine Arts of Carnegie Institute of Technology, Pittsburgh, and at present director of the School of Architecture of Princeton University.

Great impetus to good design has been given in recent years by the ateliers of the Beaux-Arts Institute of Design in New York and by the competitions organized under its auspices. Henceforward there will be collaboration between the Institute and the Department of Fine Arts of New York University so that the one will supplement the work of the other in order to give the student such knowledge of Mathematics, Mechanics, Engineering, History of Architecture and Allied Arts, Freehand Drawing and Modeling which will fit him for the practice of architecture.

A diploma will be granted to those fulfilling the joint requirements of the two institutions.

An important feature of the new division is that no specific time limit will be fixed for completion of the course—progress will depend upon the ability and industry of the student. All students who show evidence of sufficient preparation will be allowed to take the examinations, regardless of where and how their knowledge and ability were acquired.

Bulletins announcing courses to be given, etc., will be issued early in September.

The ARCHITECT'S LIBRARY

DUTCH ARCHITECTURE OF THE XXTH CENTURY*

Modern Dutch Architecture has been dominated by two men, during the second half of the nineteenth century by P. J. H. Cuypers, and after 1900 by H. P. Berlage.

Cuypers was the representative of the Neo-Gothic movement in Holland. It was he who brought about the adoption of a national system of building under the well-known watchword of Viollet-le-Duc: Toute forme qui n'est pas indiquée par la construction doit être repoussée." But Dr. Cuypers was more than a worshipper of style. His work was a battle for rational methods of building at a time when architecture in Holland had fallen into a depressing medley of Renaissance with national shades—Dutch, German and French. Everyone imitated some "style," frequently with iron and stucco. For centuries the preëminently Dutch building material had been brick; but in the nineteenth century this was regarded as unworthy and hidden behind plaster facing. It was Dr. Cuypers who brought the brick out from behind it again and thereby brought a revival of the fine characteristics of old Dutch architecture. He never wrote, but he produced buildings which were manifestations of the new conception. His work was done chiefly between 1850 and 1890, the period when Viollet-le-Duc in France and Ruskin in England were preaching Gothic so powerfully.

There was an intellectual revival in the latter part of the century, international, but peculiarly significant in Holland, where it is called "The Movement of 1880." The blending of this movement with the influence of Dr. Cuypers produced a ferment among a group of young architects, who were prolific in writing and surprising in their theories. Not much building came of it until the Municipality of Amsterdam, in 1898, commissioned H. P. Berlage to build the New Bourse. (See page 92.)

Berlage's influence, and the influence of this one building, was wider than that of Cuypers, which did not extend beyond the frontiers of Holland. The consideration enjoyed abroad nowadays by modern Dutch architects is due to the cosmopolitan character of Berlage's first works. To the younger men of that time his creation (the Bourse) was the incarnation of their abhorrence and hatred of style imitation. In this building the forms adopted by Berlage were regarded as "New," and they overrated the virtues of innovation. The younger Dutch architects of recent years have showed themselves capable of turning out a dozen "new" forms a day. Finding new forms is not in itself the creation of a new art. Berlage's striving carried with it a purification, refinement and attention to every detail. He did not only renovate forms. He brought a new color into buildings, and improved the methods of construction—his are works of great imagination and power. Amid the glitter and excess of the younger architects, Dr. Berlage remains a personality apart.

The next significant figure after Berlage was K. P. C. de Bazel, whose Model Farm (Oud Bussum, Plates V, VI and VII), and the Netherlands Trading Company Building (Plates VIII and IX) made a considerable impression. His work was careful, finished and refined, rather than stimulating. These two men were the chief influence in Dutch architecture between 1900 and 1910.

After 1910 came other changes closely connected with the use of reinforced concrete. Viollet-le-Duc's "Every form not

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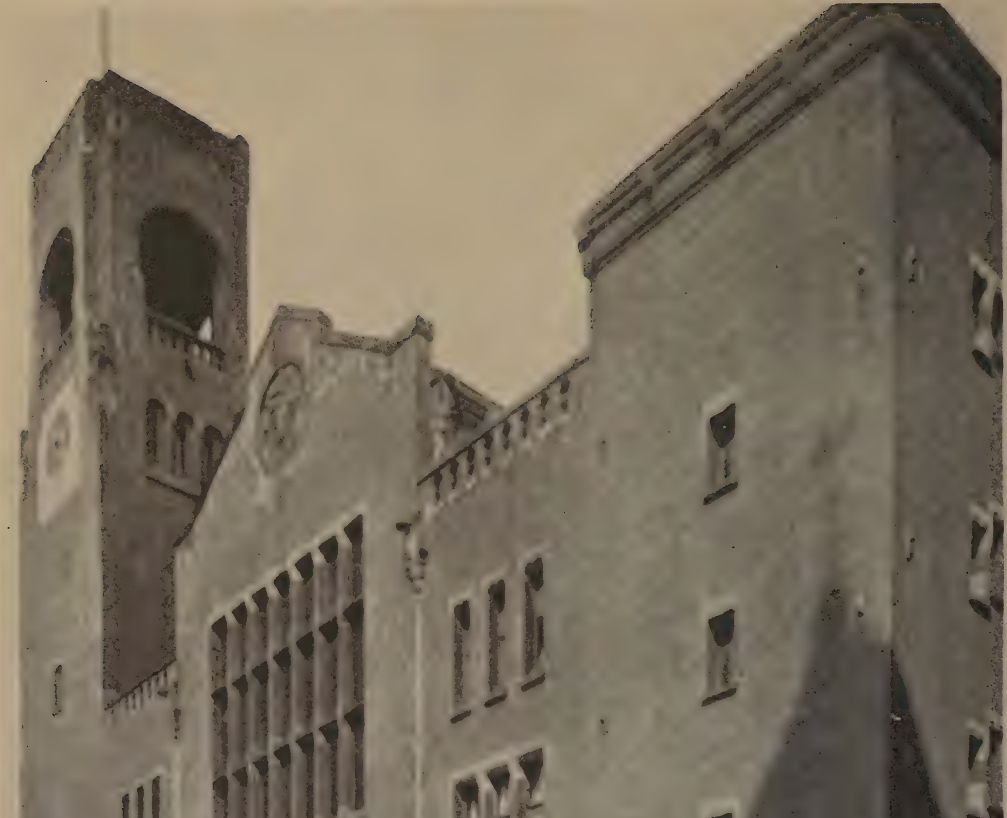
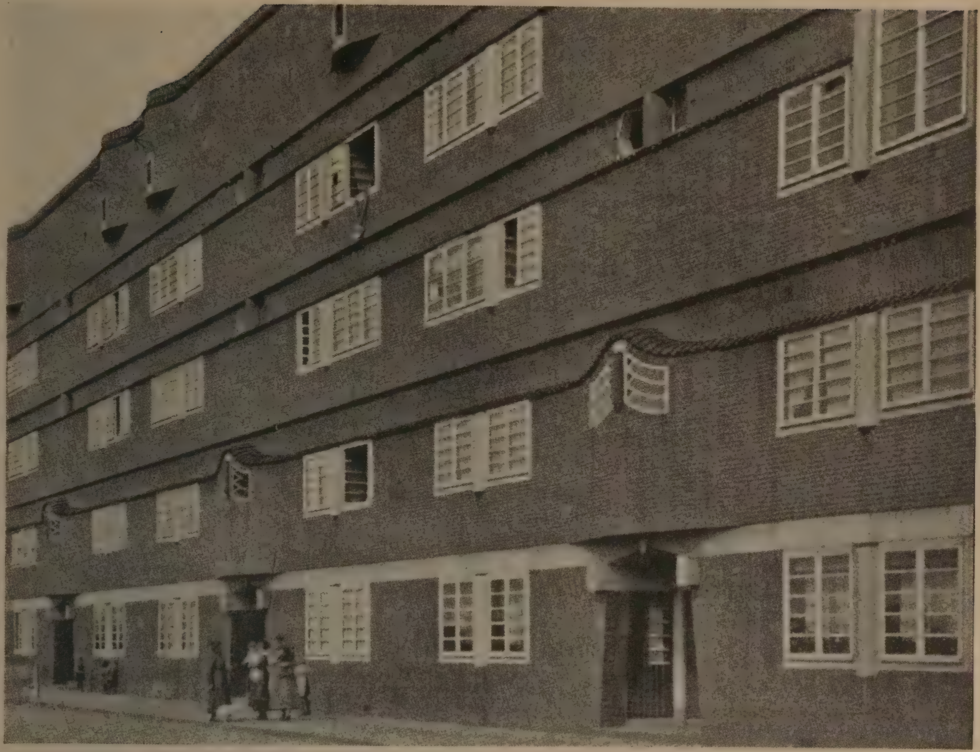
***Dutch Architecture of the XXth Century.* By J. P. Mieras and F. R. Yerbury. 100 plates. Quarto. Scribner's. $10.00.



THE NEW EXCHANGE, AMSTERDAM, 1898-1903
H. P. Berlage, Architect
From *Dutch Architecture of the XXth Century*



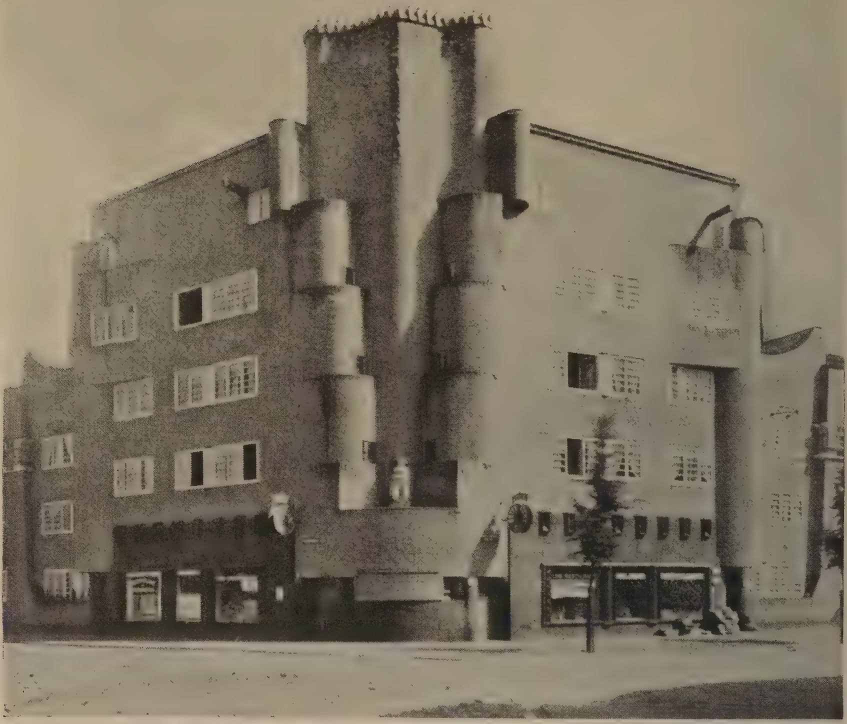
HOUSING BLOCK, AMSTERDAM, 1917
M. de Klerk, Architect
From *Dutch Architecture of the XXth Century*

suggested by the construction should be rejected" now altogether disappears. The outside of a building as a mere shell in America is associated with structural steel. In Holland it seems to have been mainly associated with reinforced concrete. The brick covering has no structural function but is stuck on to the concrete columns. The changes in Holland were led mainly by three young architects who more or less collaborated. Van der Mey, Kramer and de Klerk, of whom the last seems to have been the most talented.

Architecture was originally an "art of piling," and became by the use of the arch, an "art of spanning" as well. The discovery of reinforced concrete in the nineteenth century again displaced these limits. In reinforced concrete constructions pure statics can be abandoned in favor of feeling. But the expression in ferro-concrete is entirely different from that of the iron work (steel) used in connection with stone or brick. In the latter the different constructions of stone and iron, appear separately. In ferro-concrete these two functions coalesce, and the projecting structures produce a feeling which may be indicated by the word "hovering." The outside shell becomes free for decorative fancy, and tends to run off into an architecture brilliant but meaningless, resplendent with excessive detail, arresting by its fantastic effect, but without any core.

In Holland, as in most countries, the late movements have produced a duelism, a conflict between two influences, the old national and the new international. In most countries the two tendencies took a normal and quiet course, but in Holland there was an actual revolution. The changes came too fast. De Klerk's work was always fresh and fanciful, and never fell into odious excesses. But imitation of it was dangerous because everything in it was the expression of feeling intuitively controlled. Intuitions cannot be imitated.

The still more recent work of J. J. P. Oud of Amsterdam is very intellectual and theo-



A HOUSING BLOCK IN AMSTERDAM, 1921
P. Kramer, Architect
From *Dutch Architecture of the XXth Century*

retical; colder and less fascinating than that of de Klerk, but, from the present day point of view, more natural and therefore stronger, more capable of being successfully followed by a school.

Whatever the diversity of modern Dutch architecture, every good Dutch building displays the genuine Dutch element of picturesqueness. The picturesque is in the Dutchman's blood. Cold classicism cannot thrive in the climate and landscape of Holland.

The above is largely a condensation of Mr. Mieras' account of the recent and very interesting architectural movements in Holland. The study of the plates seems to bear out most of what he says. One sees the charm and spontaneity of de Klerk. One sees that much of the work of other men suggests a great deal of theory, of logical deduction from premises. It does not, of course, follow because some features of the work of Berlage and his adherents—a certain square blockishness, certain peculiar curves—strike an old fashioned taste as "queer" and not quite certainly attractive, that there is anything "wrong" about them. It may be only custom is needed for their acceptance. On the other hand it does not follow that they are right merely because they are logical and seem "queer." It may be that the new builders, as well as the new painters are too self conscious, and that not very distant reactions against them are approaching.

Speaking of "queerness," there is some difficulty in assimilating the usual conception of Dutch national traits with the picture Mr. Mieras draws of a Holland given to rapid radicalisms and revolutionary logic.

It may also be suggested that until an architect has a longer acquaintance than Mr. Mieras presumably has, with American steel structural architecture, he is not in a position to theorize successfully on steel structural architecture. ARTHUR W. COLTON.

Art Studies, Medieval, Renaissance and Modern. Volume III. Edited by Members of the Department of the Fine Arts, at Harvard and Princeton Universities. Cambridge, Mass. Harvard University Press. 1925. 1st ed. 163 pp. Ill. 8½ x 12 in. Bound in boards. $7.50.

A Complete System for Estimating the Quantities and Costs of Frame and Brick Houses. By: Alfred J. Donley. New York: United Publishers Corporation. 1926. 1st ed. xxviii. 956 pp. Ill. 6 x 9 in. Fabric (Leatherette). $15.00.

Giving estimating data, procedure in estimating and sample estimates with quantity surveys and summary of costs.

The Art in Painting. By: Abert C. Barnes. New York: Harcourt, Brace & Co., 1926. 2nd ed. 530 pp. Ill. 6 x 9 in. Cloth. $6.00

This book sets forth a method by which an understanding and appreciation of paintings may be secured. It is the fruit of a daily association with paintings which has lasted many years, and of an equally extended study of psychology, æsthetics, and the principles of education and scientific method. It aims to furnish a guide for discovery of the essentially plastic, that is, pictorial qualities in painting, and so to disengage what is central in art from the narrative and antiquarian aspects which in ordinary academic criticism and instruction receive so much attention.

The book contains a general account of æsthetic principles, a specific statement of those principles in the field of plastic art, and an application of them to the more important schools and individuals in painting, past and present, as well as to a large number of particular paintings. The conclusions are, so far as possible, reinforced by illustrations, of which there are more than a hundred.

House & Garden's Second Book of Interiors. Edited by Richardson Wright and Margaret McElroy. New York: Condé Nast Publications, Inc., 1926. 1st ed. 220 pp. 700 Illustrations. 9¾ x 12¾ in. Cloth. $5.

There are arrangements and color schemes for each room in the house—living rooms, bedrooms, halls, etc.—everything one would expect and many that one wouldn't, such as kitchens, bathrooms, radio rooms, map rooms, flower rooms. There is also an outline of period furniture generously illustrated, covering various English, French and Spanish periods, together with a portfolio of "How to select and how to make."

At the end of the book there is a list of the decorators whose work has been shown, and a supplementary list of catalogues to be had for nothing and the books that many be bought or consulted.

Architecture of the Old South. By: Ernest Ray Denmark with a foreword by Lewis E. Crook, Jr., Atlanta, Ga. The Southern Architect and Building News. 1926. 1st ed. 72 photographic plates. 8¾ x 11⅝ in. Cloth. $2.50.

In a recent review H. A. Aymar Embury III, says in part: "Mr. Denmark's book on the architecture of the old South is perhaps the best that has yet appeared. It is well printed, well bound, with illustrations of good size and a wealth of interiors, with so careful a choice of material that every house illustrated shows distinct personal quality and genuine architectural merit; it is a book which no one could afford to neglect."

English Rooms and Their Decoration at a Glance. 1066—1800. By: Charles H. Hayward. New York: G. P. Putman's Son. 1926. 1st ed. xxxi. 289 pp. Ill. 5½ x 8½ in. Cloth. $2.50.

The developments of style which took place with the passing of the centuries are made clear in the drawings especially prepared for these volumes by Mr. Hayward. In addition to gneral views of rooms, the illustrations include many decorative details such as staircases, chimney-pieces, panelling, ceilings, doors and door-cases, etc. The pictures are accompanied by an historical introduction and descriptive notes. The period covered is from 1066 to 1800 and the illustrated descriptions range from Norman and Gothic to Inigo Jones, Wren and Georgian work.

Joints and How They Are Made. By William W. Klenke. Peoria, Ill. The Manual Arts Press. 1925. 1st ed. 69 pp. Ill. 5¼ x 7¾ in. Cloth. 85c.

This book covers the making of good joints for practically every type of construction and will be a help to the manual training instructor and a guide to the draftsman and architect. The various types of joints are fully illustrated in the plates.

Memoirs of the American Academy in Rome. Volume V. New York: American Academy in Rome. 1925. 1st ed. 126 pp. 66 plates. 10½ x 14 in. Paper. Price: $4.

Containing description, photographs, etc., and discussion on the objects found in the Barberini Tomb, the Temple of Concord in the Roman Forum, the first and second Temple of Castor at Rome, and the Sacra Via of Nero. Also "Further Studies in Pompeian Archaeology." This volume contains the last work of C. Densmore Curtis, who died June 7th, 1925.

RECENT PUBLICATIONS

issued by manufacturers of construction materials and equipment.

[*These may be secured by architects on request direct from the firms that issue them, free of charge unless otherwise noted.*]

Bronze Sash and Store Front Construction. Sheet of information regarding products of Davis Extruded Sash Company, Lincoln, Neb.

Garages. "Building Garages for Profitable Operation." Ramp Buildings Corporation, 21 East 40th Street, New York City. 8¾ x 11¼ in. 15 pp. Illustrated.

Refrigeration. "Coldak" system of multiple refrigeration for apartment buildings, factories, delicatessens, meat markets, stores, etc. Dependability coupled with low initial and maintenance cost. General description and typical installation. Coldak Corporation, 8 West 40th Street, New York City. 4¾ x 10 in. Folder. Ill.

Interlocking Tile. "The Wall of Protection." 'A. I. A. File No. 3h 1926.) A detailed account of the protecting features of Interlocking Tile against fire, heat, cold, shock and strain and moisture, with detailed data and specifications. Interlocking Tile Corporation, Union Trust Bldg., Cleveland, Oho. i8½ x 11 in. 16 pp. Illustrated.

"The Economy Wall." Substantial fire-safe masonry at lowest cost. Booklet showing construction with details and typical installations. Method and particulars of building. The Common Brick Manufacturers' Association, 2142 Guarantee Title Bldg., Cleveland, Ohio. 8⅜ x 10⅞ in. 14 pp. Ill.

"Defying Age and Time." A history of lead through the ages. The development of the metal leading to the new lead covered product "Leadclad," the protection of imperishable lead. Notable installations. The Wheeling Metal and Mfg. Co., Dept. A., Wheeling, W. Va. 5⅛ x 7⅛ in. 24 pp. Ill.

"Oil Heating—What It Means to the Architect." How oil heating affects the beauty—the comfort and convenience of the occupants and the cost of the new home. Advantages of oil heating. Specifications and details. A. I. A File No. 30-G-1. Williams Oil-O-Matic Heating Corp., AR-66, 207 East Washington Street, Bloomington, Ill. 8⅜ x 10¾ in. 24 pp. Ill.

"PeerVent" Heating and Ventilating Unit. Advantages of installation. Description of the inside working parts of the unit. Peerless Unit Ventilation Co., Inc., Skillman Avenue and Hulst Street, Long Island City, New York. 6½ x 5¾ in. 8 pp. Ill.

Enamel Paint. "Ripolin," the original Holland enamel paint. Booklet describing usage in home interiors, homes and apartments, hospitals, hotels, stores and commercial buildings, schools and colleges, churches, industrial plants. Method of use and details. The Glidden Co., Madison St., N. W., Cleveland, Ohio. 8½ x 11 in. 24 pp. Ill.

Windows. Catalog G-26. A. I. A. File No. 16. Top and buttom sliding ventilator windows for schools, banks and public buildings, fitted with the Boca Bronze Guide. Specifications for windows with various types and sizes and standard installation details. The Bogert & Carlough Co., Straight Street, Paterson, N. J. 8 x 11 in. 16 pp. Ill.

"'White' Door Beds and Space Saving Conveniences." A. I. A. File No. 35n9. Booklet dealing with various articles including beds, kitchen cabinets, etc., which take up little space. Plans of "efficiency apartments and houses. Typical installations. The "White" Door Bed Co., 130 N. Wells St., Chicago, Ill. 8½ x 10½ in. 72 pp. Ill.

"Kleen-Heet" Architectural Reference Book of oil heating systems for architects and builders. Booklet dealing with important subjects in relation to the heating industry. Oil burner specifications. Winslow Boiler and Engineering Co., 208 S. La Salle St., Chicago, Ill. 8¼ x 10¾ in. 24 pp. Ill.

"Plastint." Colored finishing plaster. The advantages and appearance of Plastint with directions for use. Dept. C-2, United States Gypsum Co., 205 West Monroe St., Chicago, Ill. 3⅜ x 6¾ in. 10 pp. Ill.

"Pacific Steel Heating Boilers." Smokeless and direct draft types. A. I. A. File No. 30-C-1. Bulletin No. SC 26. Particulars of boilers with steam and hot water specifications. General Boilers Co., Waukegan, Ill. 8½ x 11¼ in. 10 pp. Ill.

Steel Casements. "How windows can make better homes." Pamphlet dealing with the importance of windows and advantages of Lupton's Steel Casements. David Lupton's Sons Co., 2209 E. Allegheny Ave. and Tulip St., Philadelphia, Pa. 3⅞ x 7 in. Illustrated.

Concrete Admixture. "Feather-Stone 'Sixteen.'" Data for architects, engineers and contractors. Bulletin No. 8. Giving directions for use and table of proportions in mixing. Feather-Stone Insulation Co., 611 E. 4th St., Los Angeles, Cal. 7⅞ x 10½ in. 7 pp.

Air Washers. Bulletin No. 1923, describing. "Sirocco Air Washers." American Blower Co., Detroit, Mich. 8½ x 11 in. 31 pp. Illustrated.

Ventilating Fans. Folder describing new Permanent Wall Fixture for the American Blower Reversible Ventilating Fan. American Blower Co., Detroit, Mich. 8½ x 11 in. Illustrated.

Soft Pine Timbers. "Arkansas Soft Pine Hand Book." (March, 1925.) Concise description of Arkansas Soft Pine and its proper use. Moulding designs full finished size. Lists per hundred lineal feet. Arkansas Soft Pine Bureau, Little Rock, Arkansas. 7 x 10⅜ in. 46 pp. Illustrated.

Metal Covered Doors and Trim. Catalog No. 72. Standards for detailing metal covered doors, frames, trim, partitions, smoke screens, windows. Including standard and special designs of mouldings and shapes. Detailed diagram and typical installations. Coburn Trolley Track Mfg. Co., Dept. D. 2, Holyoke, Mass. 8½ x 11 in. 48 pp. Ill.

Hardware. Catalog No. A-3 of period hardware. Door handles and knockers, shutter holders, chimney ornaments, latches, casement fasteners and other builders' hardware in various finishes and period designs. Earle Hardware Manufacturing Co., 2369 East 51st Street, Los Angeles, Cal. 6½ x 10⅜ in. 156 pp. Ill.

Store Fronts. "The Business of Buying a Store Front." Designs and materials of different types. The question of finance. Metal sash and store front construction. Zouri Drawn Metals Co., Chicago Heights, Ill. 8½ x 11 in. 32 pp. Color Ill.

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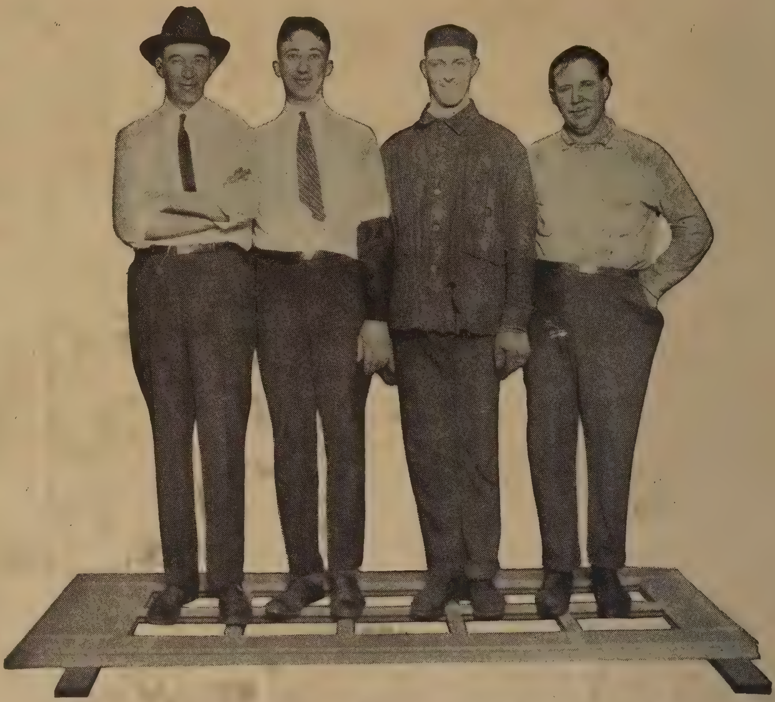

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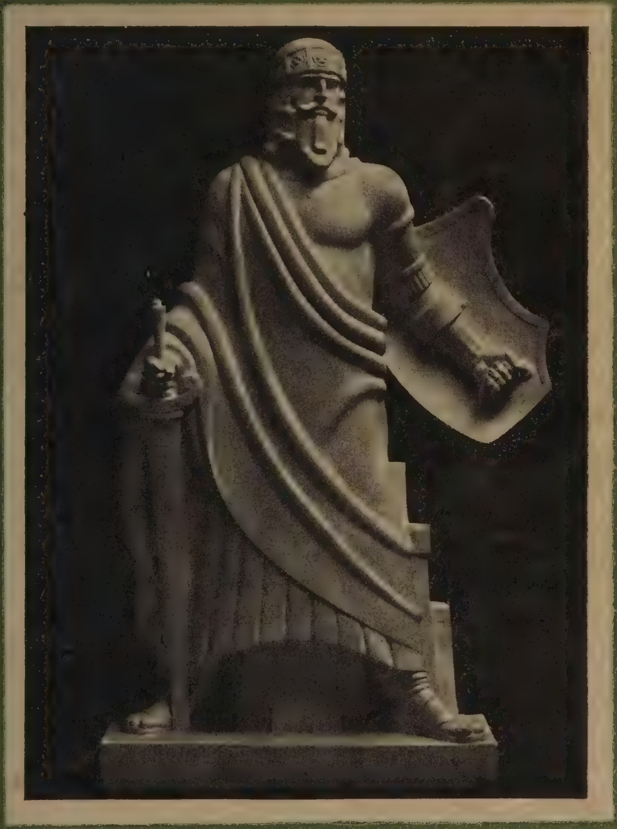

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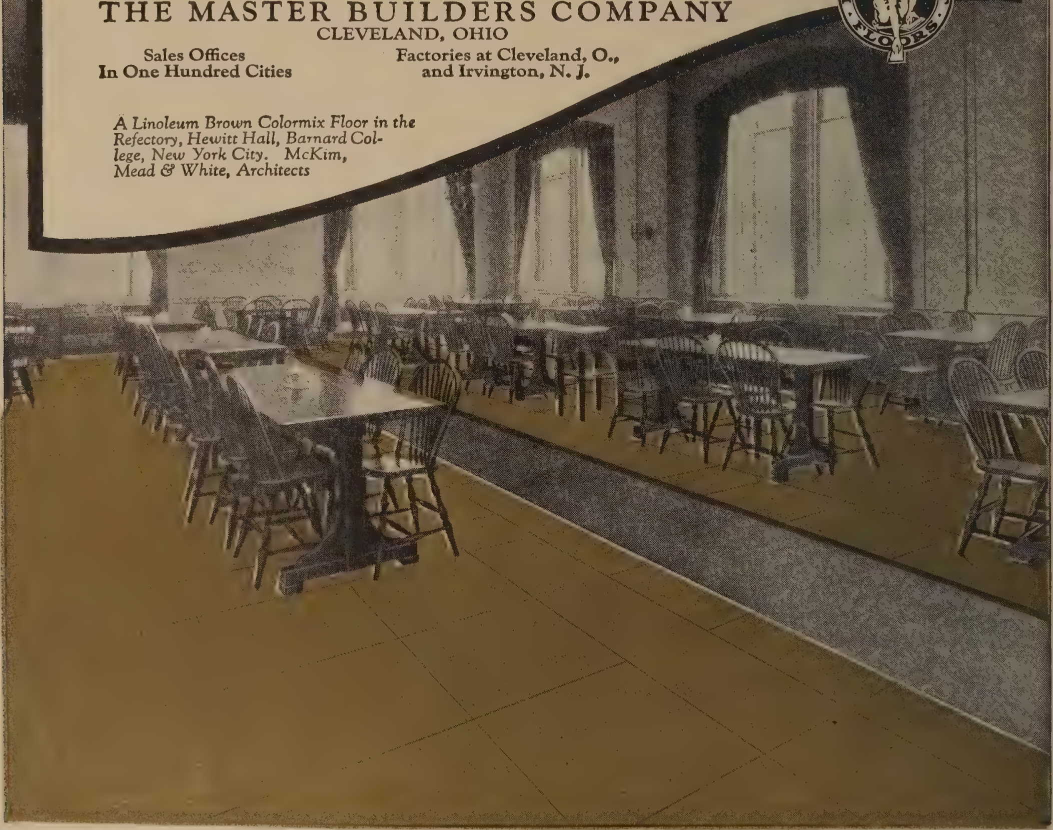
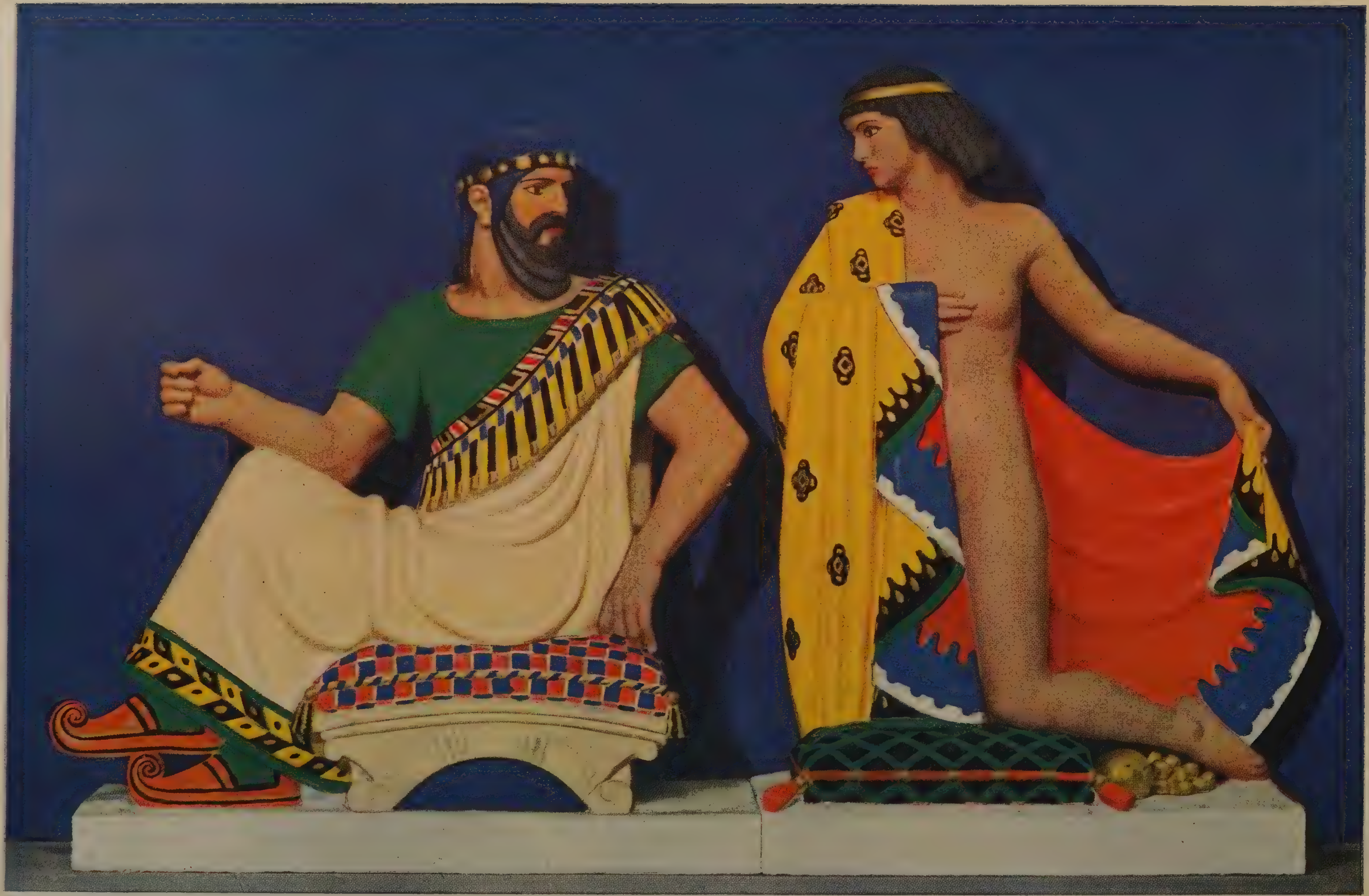


A Linoleum Brown Colormix Floor in the Refectory, Hewitt Hall, Barnard College, New York City. McKim, Mead & White, Architects

The ARCHITECTVRAL RECORD



Two Figures in Polychrome, Forming Part of the Pediment

Designed by John Gregory for the Philadelphia Museum of Art, Fairmount Park, Philadelphia.

The
ARCHITECTVRAL
RECORD

VOLUME 60 AUGUST, 1926 NUMBER 2

The PHILADELPHIA MVSEVM of ART FAIRMOVNT PARK, PHILADELPHIA

A REVIVAL OF POLYCHROME ARCHITECTVRE and SCVLPTVRE

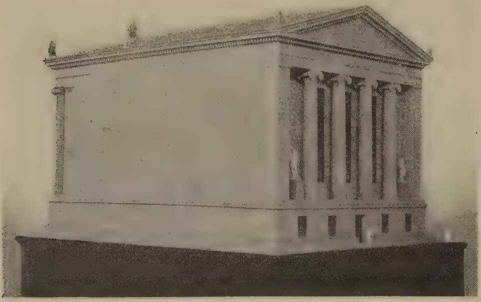
C. L. Borie, Jr. Horace Trumbauer and C. C. Zantzinger, Associate Architects
John Gregory and Paul Jennewein, Sculptors – Leon V. Solon, Polychromist

By Leon V. Solon

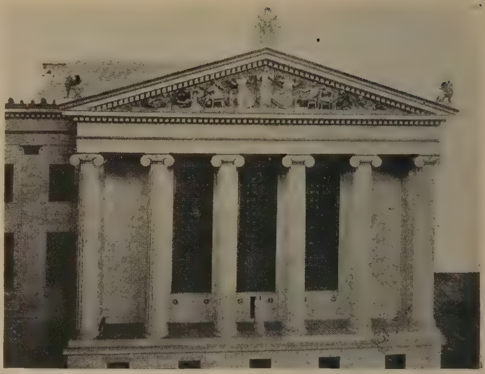
THE CITY OF PHILADELPHIA has undertaken the first serious attempt to break the Renaissance tradition of monochrome architecture, by the polychrome treatment of the Fairmount Park Museum. When we refer to this building as the first of its kind we do so in full cognizance of many others in which color has been furtively used; but as polychromy is more a science than a skittish impulse, we feel unable to take such experiments seriously, through their complete lack of evidence that the function of color in architectonic effect was comprehended. In the spirit of bavardage we record a few intimate facts concerning the origin and progress of this polychrome building.

The idea of reviving the practice of polychromy in the new museum building germinated in the fertile imagination of Charles L. Borie, of the firm of Borie, Zantzinger and Medary, of Philadelphia. At first his project failed absolutely in exciting response or enthusiasm; in fact those to whom it was imparted regarded it as indicative of a frivolous attitude towards a type of structure invariably identified with an academic formula in design. It must be admitted in extenuation of this frigid reception, that polychromy was an indeterminate quantity in effect, under justifiable suspicion of a capacity for spectacular vulgarity. Even today, only a small minority of the profession realize that polychromatic decoration was inseparably connected with Greek architectural design, from the earliest period of structural evolution to the time of full maturity—not as an occasional and minor embellishment, but as a dominant factor in all exterior effect.

As Borie's enthusiasm and imagination are fortified with a tenacious temperament, he went quietly to work attempting to locate reliable information concerning the technique and practice of polychromy. Those who, like the writer, have undertaken this discouraging quest, know the complete barrenness of architectural literature on this subject. His investigation included an exhaustive examination of the files of architectural magazines, with the result that only one very sketchy article by the writer was found.* This dealt with fundamental principles based upon Greek practice as evidenced in excavations and archaeological restorations. Borie wrote to Magonigle for information concerning the author, who placed us in communication in 1921. A meeting was arranged which, but for Borie's equable disposition, might have been the only one; as in describing his general concept of a polychrome façade, some of the most spectacular features were taken exception to as lacking precedent. He was frank in stating his condition of isolation and the meager prospect of carrying the project through, owing to the number of sceptics who would have to be converted and convinced. I gathered that the fate of polychromy was in the hands of the Chairman of the Park Commission's Committee on the Museum, Mr. Eli K. Price. At that time I had not met the latter, but recall feeling greatly reassured on learning that he was an accomplished classical scholar, for with his background of Greek literature, it seemed logical to assume that the rivival of so important a practice would recommend itself.

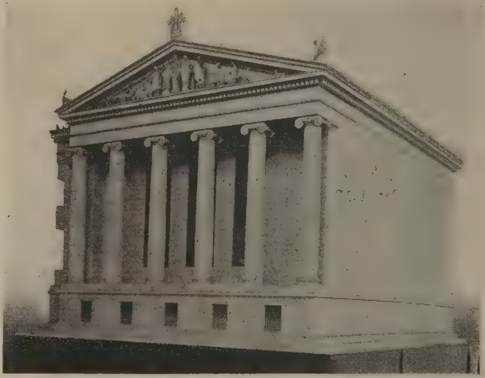


Plaster model in undecorated condition



First subject designed by John Gregory with polychrome setting and treatment

With habitual thoroughness, the Chairman studied a number of archaeological works dealing with those Greek buildings upon which sufficient color had survived to permit a reconstitution of the original effect. About that time a series of articles appeared in this magazine** dealing with the application of Greek



Second design by John Gregory. At this stage the dentils in the pediment were discarded as they interfered with the effect of the pediment groups practice to modern design. When Mr. Price grasped the extent of polychromatic practice in Greece, and the feasibility of producing an equivalent effect to the prototype in the museum building, he became an enthusiastic supporter of the Borie project, giving it his full endorsement. The knowledge which he thus acquired of color precedent and technique, combined with a keen critical faculty, rendered him an invaluable collaborator throughout all subsequent developments.

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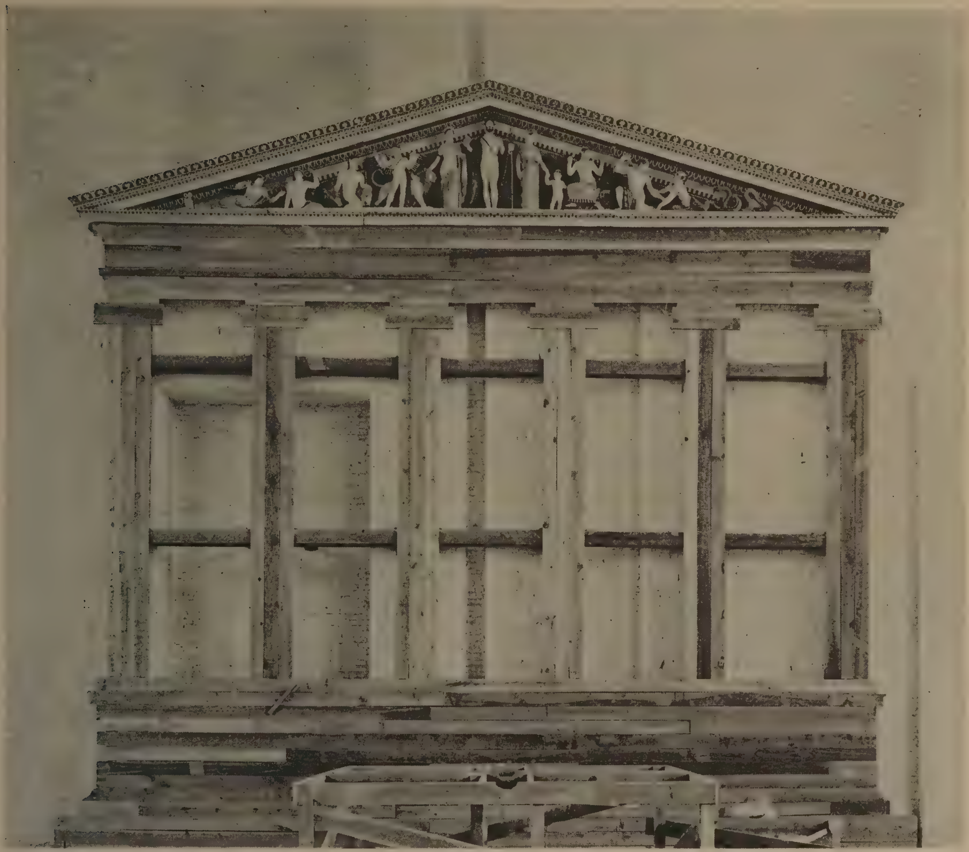
* "The Principles of Polychrome in Sculpture, based on Greek Practice," in THE ARCHITECTURAL RECORD, June, 1918.

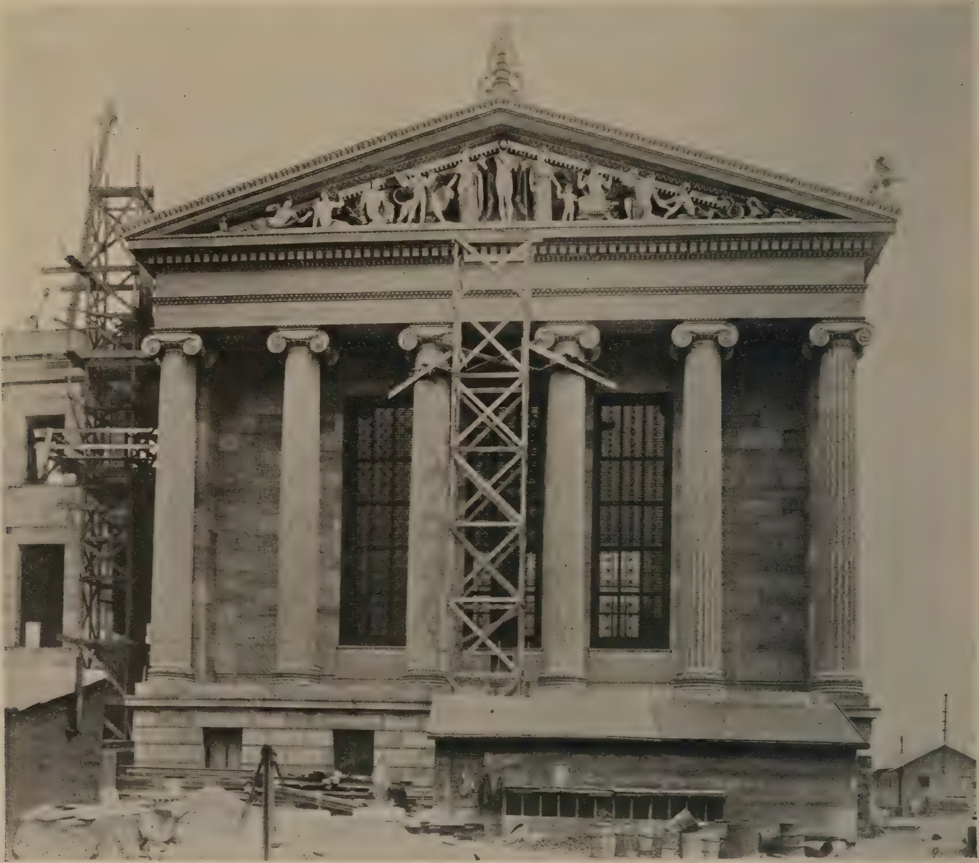
** "Principles of Architectural Polychromy" in THE ARCHITECTURAL RECORD January-June 1922.

In view of the importance of the building, and the responsibility involved in reviving a lost art on so large a scale, he and Borie decided that every conceivable precaution should be taken to assure satisfactory results. The first step was to order an eighth scale model of one of the smaller pavilions, upon which all color decoration could be developed. The services of the writer were retained as polychromist to collaborate with the architects and sculptors: Horace Trumbauer was already an associate with Borie and Zantzinger.



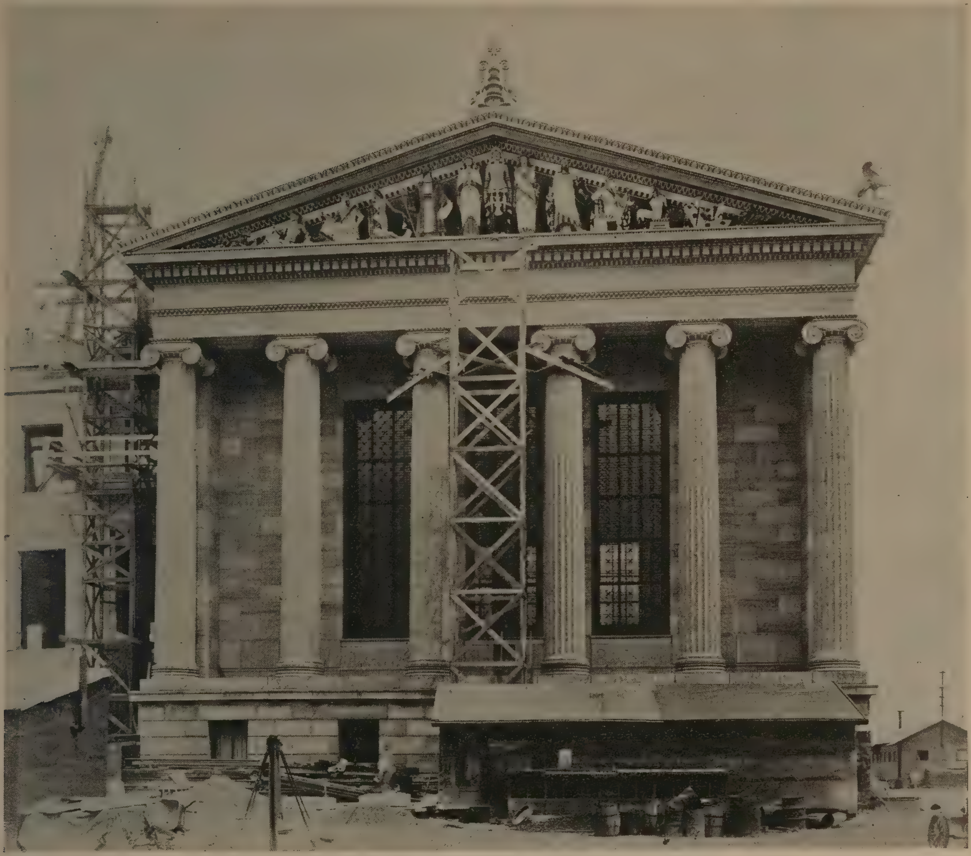
One-thrd scale model pediment designed by Paul Jennewein placed at proportional height on wood silhouette

Polychromy was not the only revival which Borie contemplated. He communicated with the late Professor Goodyear in order that those refinements which the latter had recorded in connection with the Parthenon and other famous Greek structures might be applied to the new building. Blue prints were sent to the Professor who made calculations upon the Greek basis, indicating curves in retaining walls and other modifications of normal practice. The scale model was made in conformity with Professor Goodyear's refinements. When Borie and the writer visited the modeller to inspect the unassembled parts of the model, both experienced a pronounced sinking sensation due to curvatures on walls which seemed seriously distortious. The model was sent to Philadelphia for assembly in one of the old park buildings; when put together, these curves were only appreciable when sought, and a beauty and vitality imparted to the model which possessed a rare structural quality.


Composite photograph; building in present condition with photo of Jennewein's one-third scale model inserted

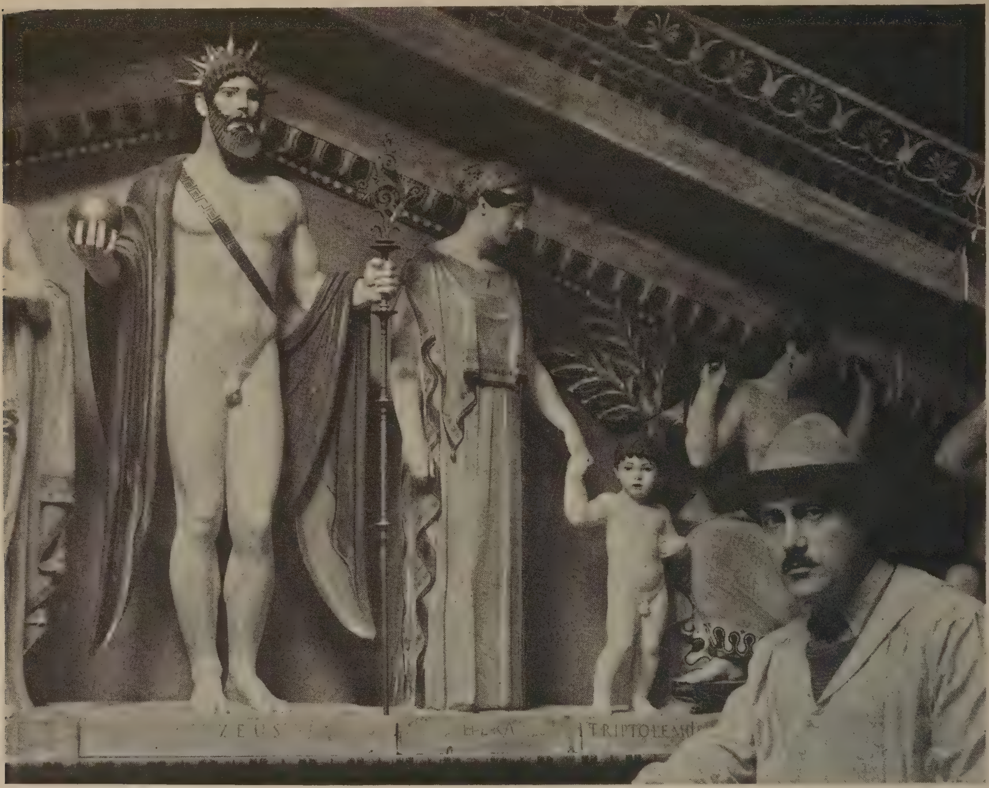
The next stage was to commence the polychrome decoration in accordance with Greek practice. All strongly carved sculptural detail was modelled, and those moldings which were intended for low relief were left in profile only. A small section of the entablature and a column cap were supplied to the writer for the development of ornamental detail and color arrangement. When an apparently satisfactory result was realized, the detail was drawn in pen-outline, reproduced, and printed upon thin paper so that it might be stuck upon the moldings and colored; the modelled detail being colored upon the plaster. The great value of the scale model at once became apparent, and many alterations and improvements were made, both in the choice of decorations, and in the general arrangement of color upon detail.

By that time it was definitely decided that the pediment groups would be decorated with color after the Greek manner. Sculptors had to be found whose work was of such formal character that it would lend itself to color decoration. In addition to professional capacity, the question of willingness to collaborate had to be considered, as sculptural treatment and composition must necessarily be subject to the requirements of color effect which are somewhat uncompromising; the willingness of the sculptor to subject many established prejudices to the attainment of an unknown objective was a vital qualification. A distinctive species of sculptural technique would have to be evolved, and the composition of figures and accessories so contrived that the polychromatic decoration might be rhythmically distributed, making the triangular area a uniform quantity in the effect of the façade. After weighing the selection of sculptors very thoroughly, Borie made the fortunate selection of John Gregory and Paul Jennewein, both of the American Academy in Rome. The uncertainty as to what might happen to their work when colored undoubtedly caused both serious misgivings, and there is little doubt that a decision to exempt sculpture from color at that time would have been very welcome. Being thoroughly good sportsmen they entered into the spirit of adventure, making every modification in composition and treatment that might assist color composition. As the work progressed they became enthusiastic poly-



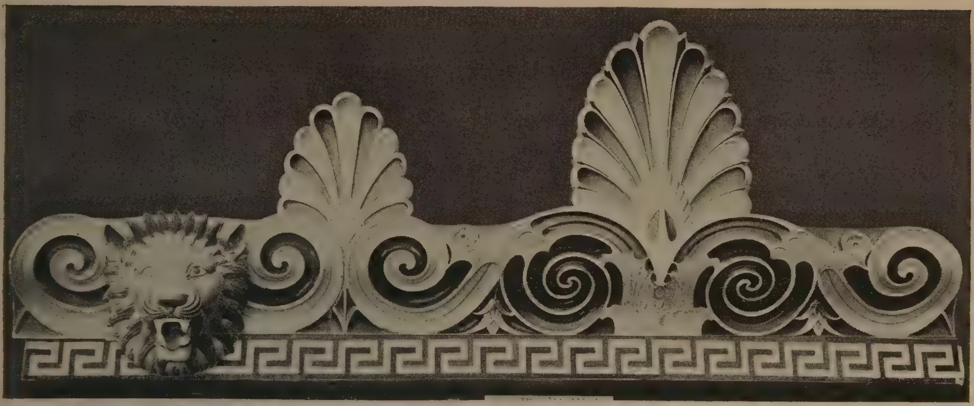
Composite photograph with photo of Gregory's one-third scale model inserted chromists, developing new and rare qualities in composition and treatment which will add considerably to their reputations.

A similar experimental process was adopted with the pediment groups that had proven so valuable with the polychrome ornamentation. Small groups, made to the scale of the model, were roughly decorated with color and placed in the colored pediment. The first groups were abandoned as the sculptors evolved a more suitable subject; this was again worked out in the model scale, colored, and accepted for development in a third of full size. In the first groups, the ornamental scale of decorations on the figures of the Aegina pediment was used for the polychrome decoration of the groups; but, curiously enough, it was found much too small for effectiveness from the viewpoint at which the museum building would presumably be examined: This is one more instance of the requirement for upward revision of scale in stylistic examples that are to serve in this country. The scale of ornamentation on draperies, etc., was revised and considerably increased, with much more satisfying results.



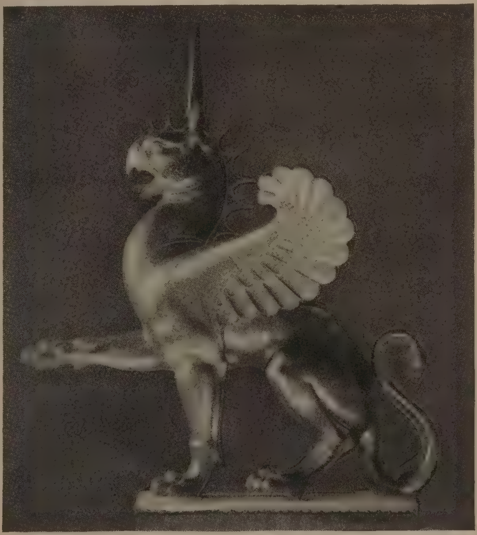
Section of Paul Jennewein's one-third scale model (sculptor on right)

The sculptors finding that the polychrome setting of the pediment moldings had a strong influence upon composition and the ultimate result, had wooden pediments made at a third full size in which to model their third scale groups: these were fully polychromed with stencil patterns before the models were started. When each group had finally reached a state of development which appeared to leave no detail in doubt, they were cast in plaster and shellaced ready for coloring. Then commenced the most fascinating and bewildering problem which the writer has



Detail in Paul Jennewein's pediment

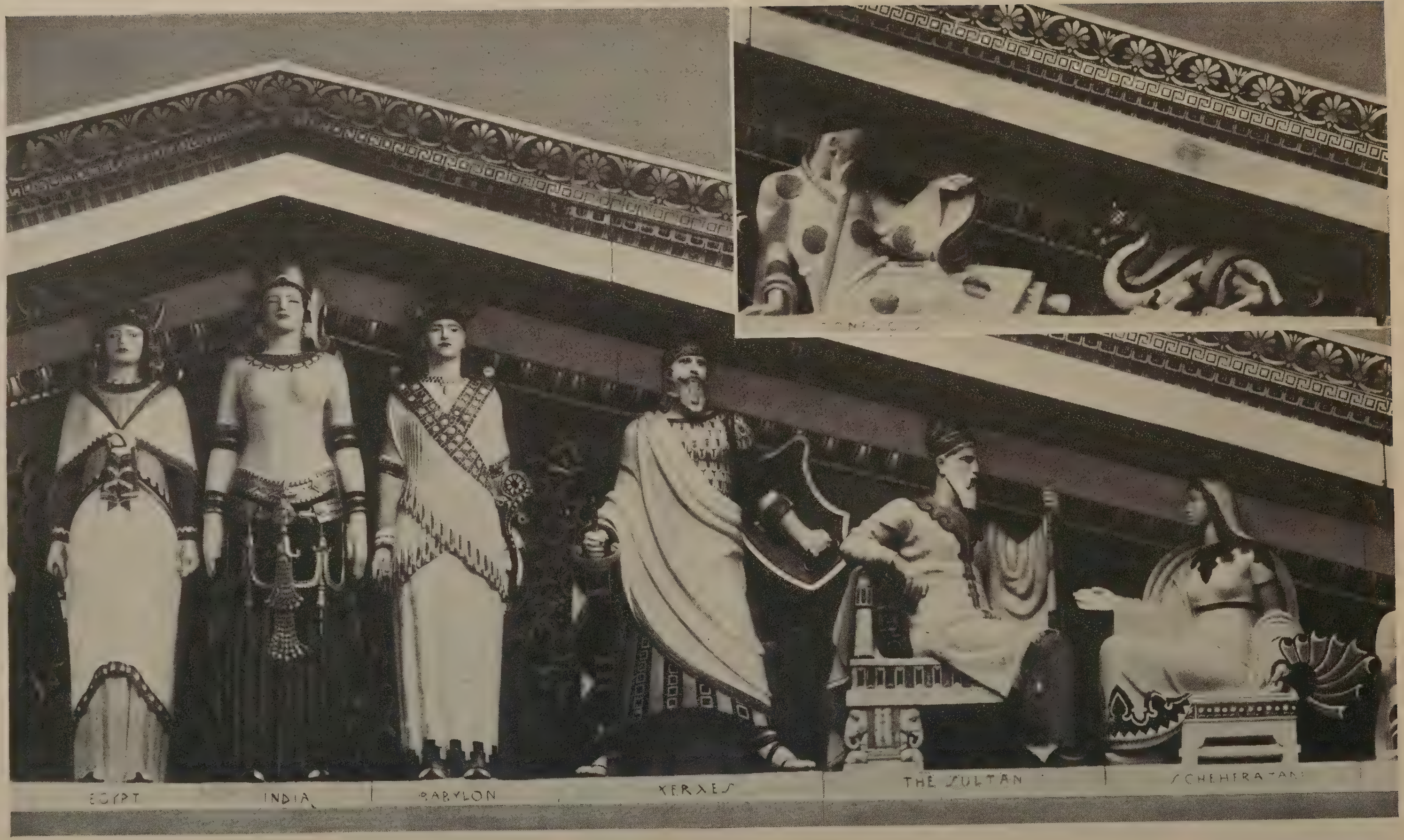
ever undertaken. The groups became as sensitive as a musical instrument, and color was in actuality a dynamic force which could link together or completely separate features in composition. Brilliant colors were used, such alone being adaptable to conditions of visibility at long range. These had to be so inter-related from one figure to another, and so spaced throughout the whole group that, in certain instances, it was necessary to revise sculptural detail to facilitate color distribution. It may be readily comprehended, that the position of polychromist might have been unenviable had not Gregory and Jennewein entered into the association with so admirable a spirit of collaboration. The satisfaction which they both expressed at the final result was the most gratifying experience in an undertaking which has been uniformly delightful.



Sphinx designed by Paul Jennewein

Paul Jennewein is responsible for the modelling of all the architectural detail, which is without equal in any building yet erected in this country; it was an arduous task in which he displayed an unbelievable amount of patience and good-will. All models were made to terra-cotta scale, cast in plaster and treated with color and gold; then taken out of doors and hoisted about fifty feet. In most cases ornamental scale which appeared quite satisfactory in the studio underwent radical change when hoisted to that height, as colors of a certain character maintained their actual area in effect, while others of another character appeared to shrink in area; this necessitated remodelling, recoloring, and a number of new calculations.

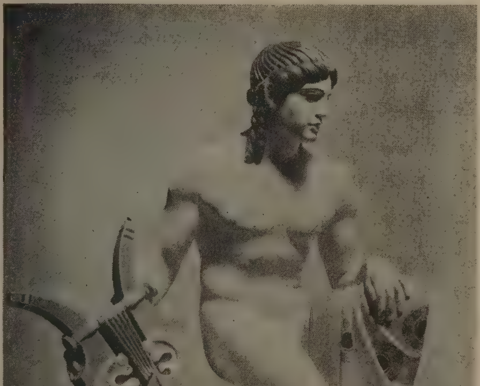
The ornamentations were to be produced in polychrome terra-cotta, and as the tendency of that craft is in the direction of ultra-conservatism, colors were predetermined; the matching of established hues was a pre-requisite for the consideration of bidders. The Atlantic



Section of John Gregory's Pediment
PHILADELPHIA MUSEUM OF ART, FAIRMOUNT PARK, PHILADELPHIA

Terra-Cotta Company qualified, and after considerable experimentation produced very excellent material, with colors and gilding of unequalled quality. They entered into the contract with enthusiasm, realizing the importance of the project, and the opportunity for advancing the status of their industry in the estimation of the architectural profession. Special kilns were built, and revisions made in normal procedure which have hitherto been systematically avoided in that industry. They are to reproduce the pediment figures, and as the central figures in the smaller pediments measure over eleven feet in height, they will have an opportunity for further achievement. The roof tiles are also of terra-cotta, measuring approximately three feet square; these are of a greyish blue glaze on the face, with a dark blue edge, so that as the building is approached, the coloring of the roof deepens with the foreshortening of the tiles; this principle is found in Greek roofs, but other colors are used.

In a polychrome building the color of the structural material is naturally a vital consideration, and an exhaustive inspection of all available materials was made by the architects. This resulted in the adoption of "Kato" stone, which is of a golden orange hue, clouded with silver grey; this forms an ideal combination with the brilliant colors of decorative features.

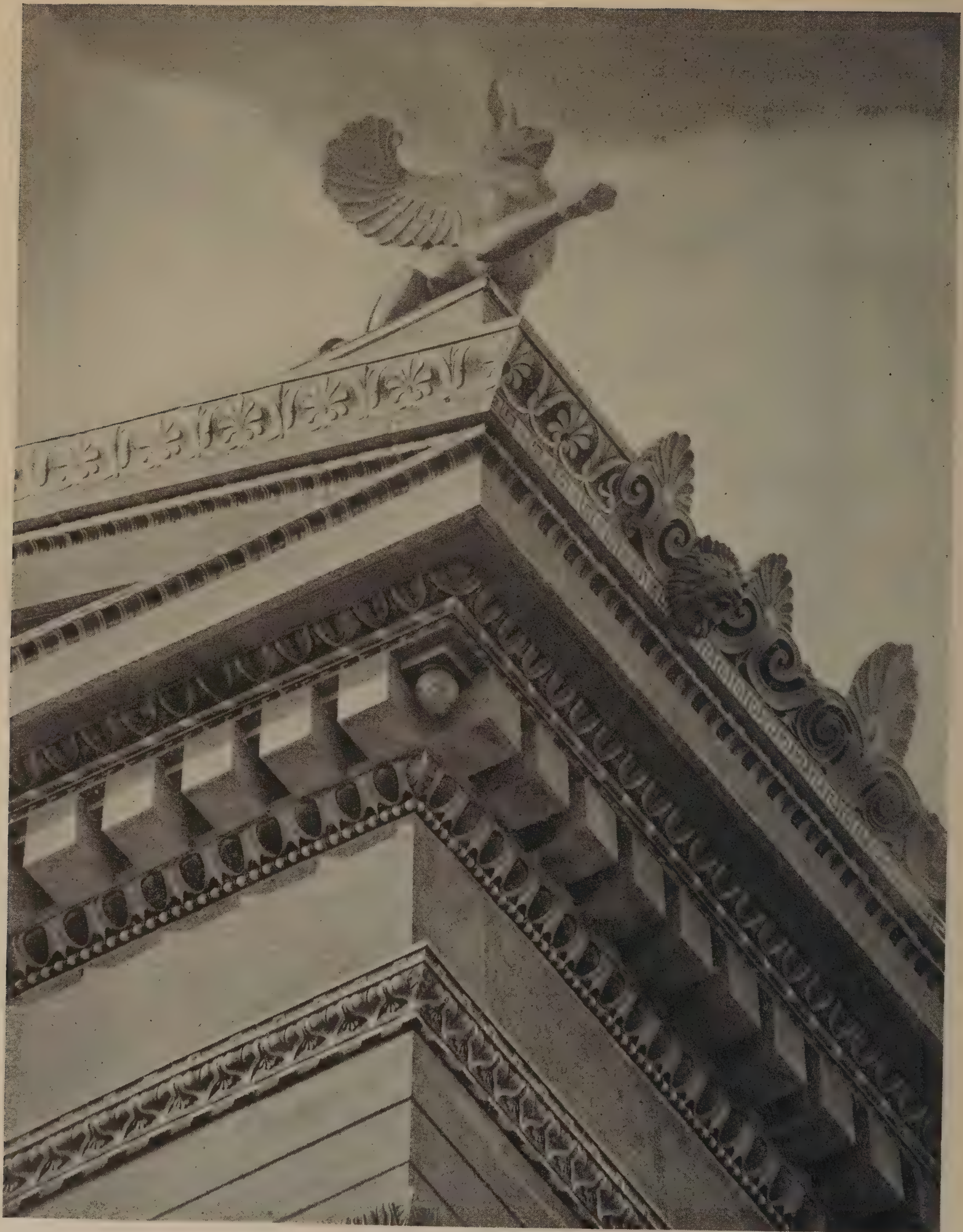


One of Paul Jennewein's figures on left of group

Akroterion designed by Paul Jennewein

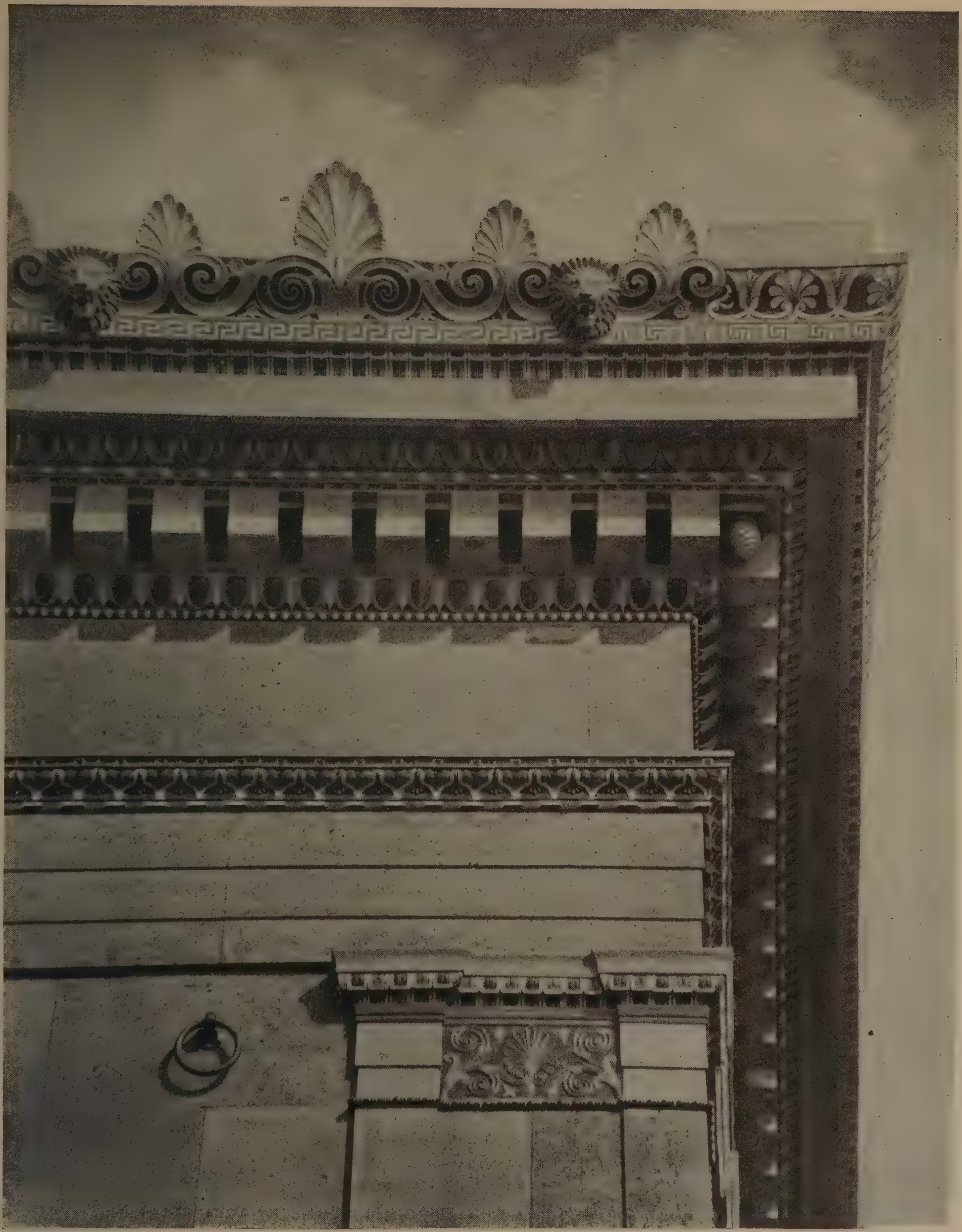
Many will probably be surprised to find the relatively small amount of color that is permissible in a polychrome exterior of the classic type. The Greek principle was absolutely adhered to; this consists in restricting color to decorative features and developing color elaboration in inverse relation to structural significance. In detail many deviations were made from Greek practice which affected color composition upon individual members and the mutual relation of members: the main aim was to produce a distinctive color quality upon each member or feature, to prevent unrelated items associating in effect through similarity of coloring.

The conditions under which this building is being produced are exceptional, and could not be followed in commercial structures in which a data for completion must be rigidly adhered to. In the dominant importance attached to experimental



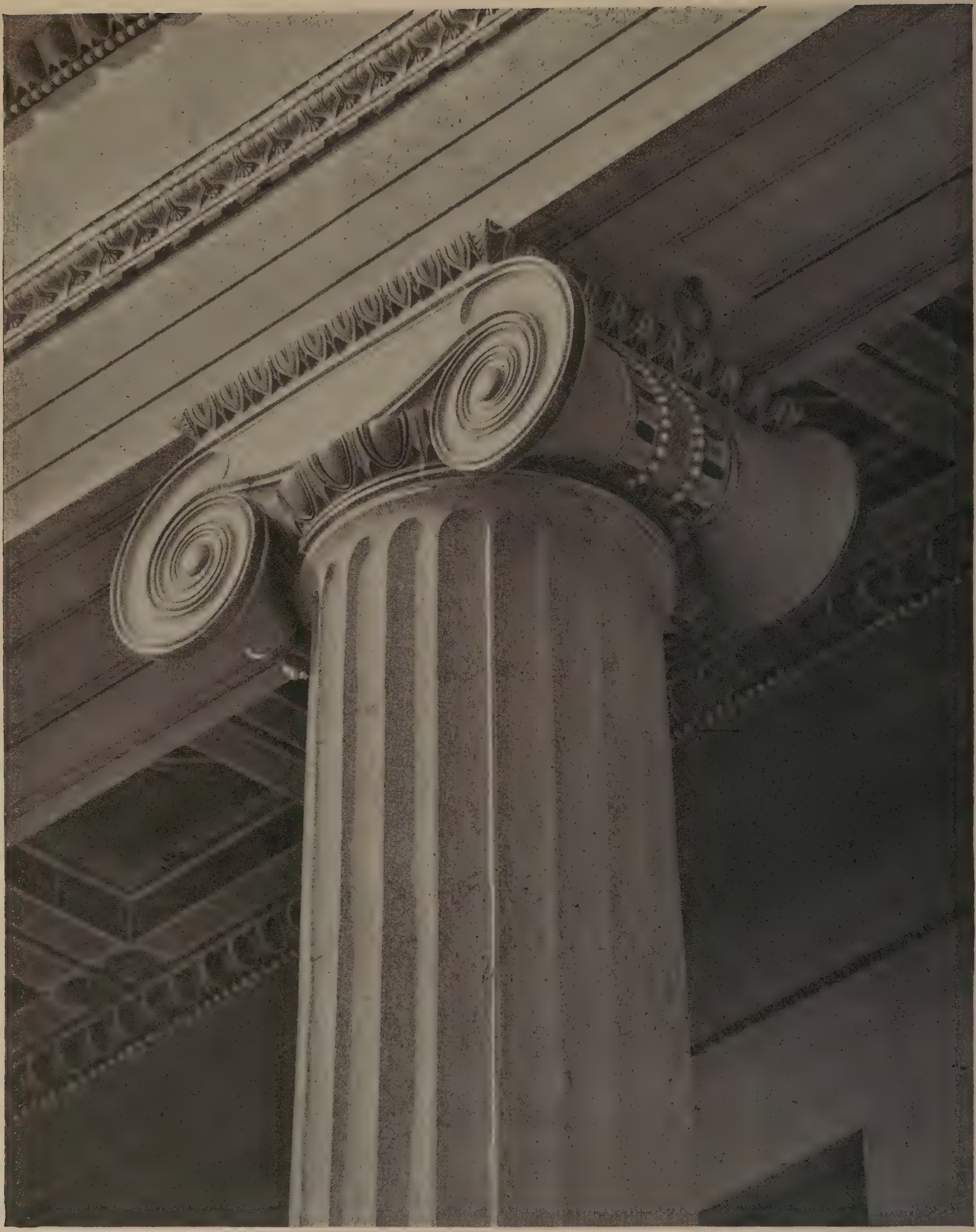
Photo, Sigurd Fischer

Angle of pediment. Akroterion sphinx of gilt bronze.
THE PHILADELPHIA MUSEUM OF ART, FAIRMOUNT PARK, PHILADELPHIA
C. L. Borie, Jr., Horace Trumbauer and C. C. Zantzinger, Associate Architects



Photo, Sigurd Fischer

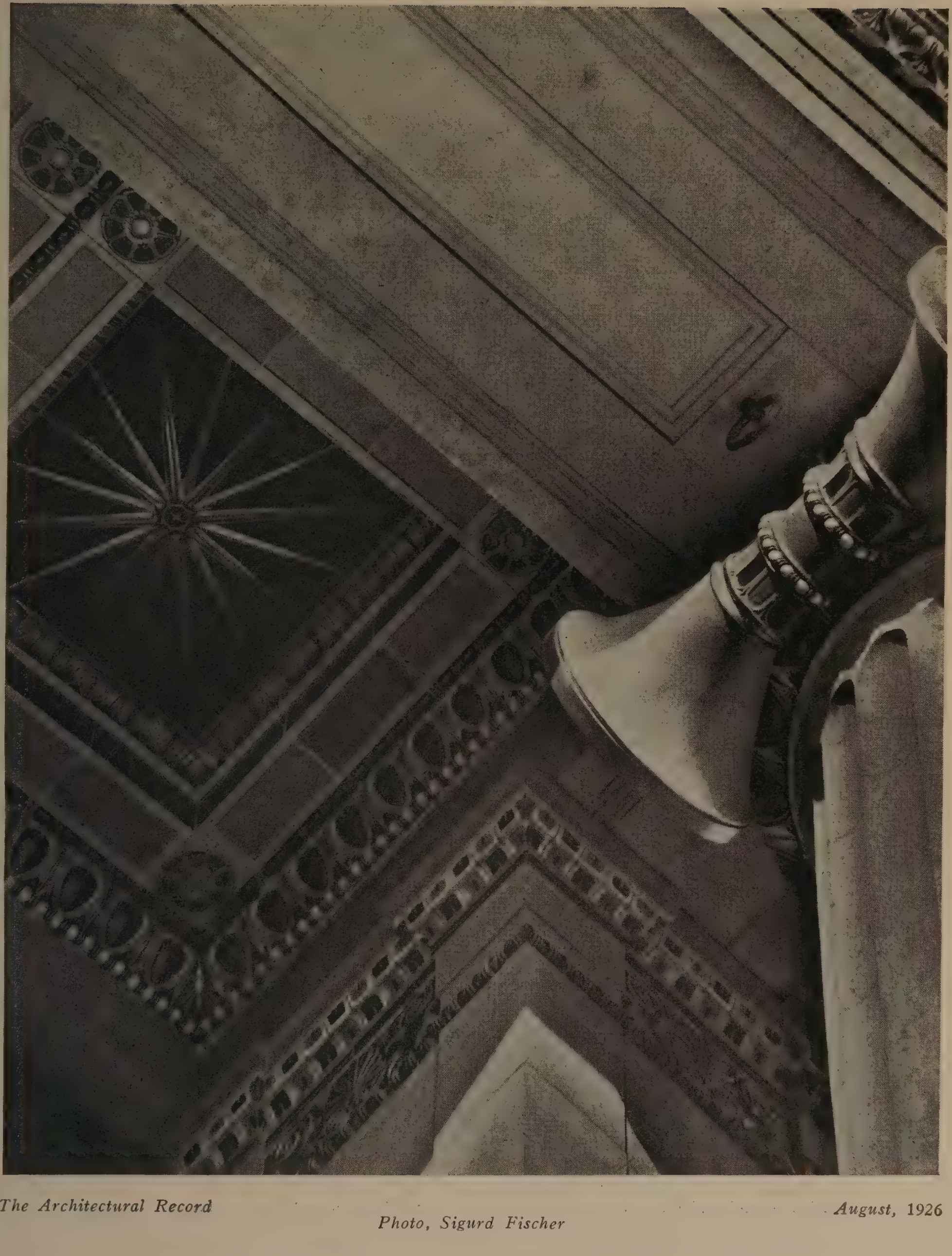
Angle of pavilion seen from side
THE PHILADELPHIA MUSEUM OF ART, FAIRMOUNT PARK, PHILADELPHIA
C. L. Borie, Jr., Horace Trumbauer and C. C. Zantzinger, Associate Architects



The Architectural Record *August,* 1926

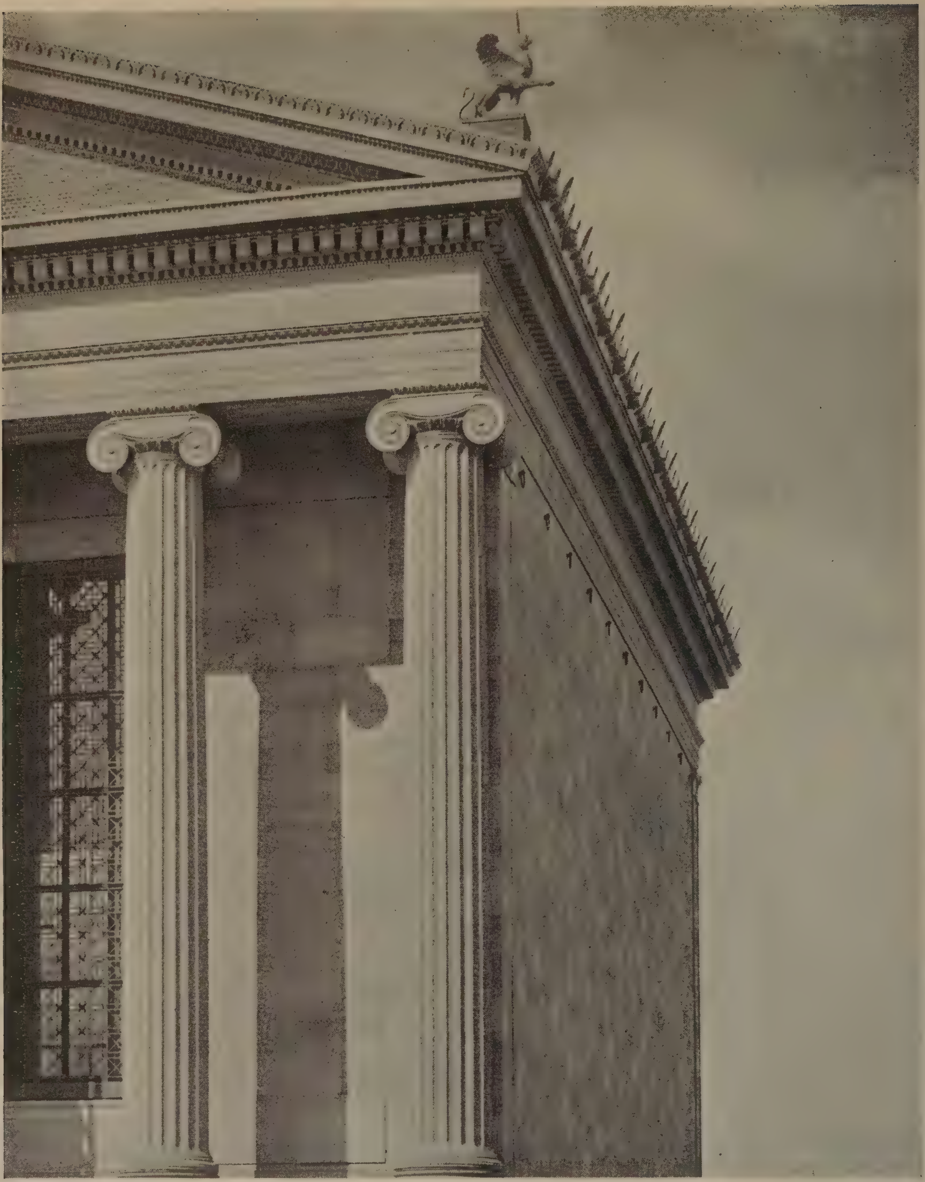
Photo, Sigurd Fischer

Capital Detail
THE PHILADELPHIA MUSEUM OF ART, FAIRMOUNT PARK, PHILADELPHIA
C. L. Borie, Jr., Horace Trumbauer and C. C. Zantzinger, Associate Architects



Photo, Sigurd Fischer

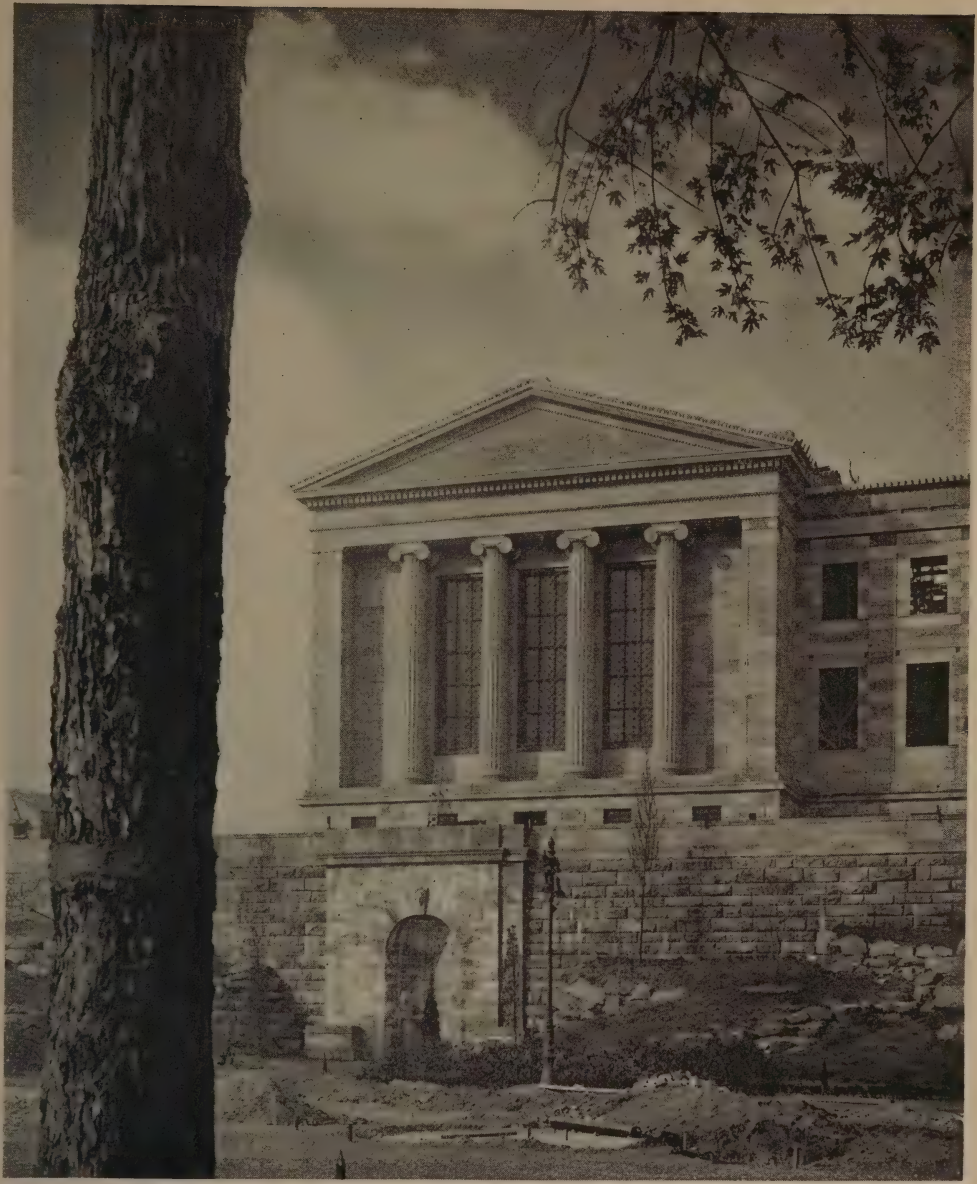
Ceiling of Portico
THE PHILADELPHIA MUSEUM OF ART, FAIRMOUNT PARK, PHILADELPHIA
C. L. Borie, Jr., Horace Trumbauer and C. C. Zantzinger, Associate Architects



Photo, Sigurd Fischer

Front elevation of one of end pavilions
THE PHILADELPHIA MUSEUM OF ART, FAIRMOUNT PARK, PHILADELPHIA
C. L. Borie, Jr., Horace Trumbauer and C. C. Zantzinger, Associate Architects

stages it recalls the practice of by-gone ages, in which all embellishment was done on the spot, or on features actually in place. Though this method is not feasible in our day, we believe that the process followed in this case is the nearest equivalent to ancient methods. In questions affecting ornamental visibility, which are so



Photo, Sigurd Fischer

Rear View of Pavilion from Parkway
THE PHILADELPHIA MUSEUM OF ART, FAIRMOUNT PARK, PHILADELPHIA
C. L. Borie, Jr., Horace Trumbauer and C. C. Zantzinger, Associate Architects

frequently disregarded, the hoisting of full-sized models to their actual place is invaluable. Color is a terrific force when introduced into an architectural combination, and is capable of producing an effect upon the observer equalled only by the fascination which firearms possess for small boys.

The
MEDICAL SCHOOL HOSPITAL

By Edward F Stevens

So STRONGLY IS the medical school allied to the hospital that in many medical centres it is considered desirable to either build as a part of the medical school a hospital of considerable size, or form an alliance with an existing hospital organization in such a way as to connect directly with the hospital building; in some cases the officiating hospital may be at some distance from the medical school.

The clinical material available at all times through the close proximity of the medical school with the hospital and the professional aid to be secured from the medical school makes this combination very desirable.

The problem of the ideal connection of the two institutions and subdivisions of each it is well to discuss at some length and to show various solutions.

Prior to the beginning of this century only in rare instances did a medical school function in direct connection with any hospital in this country. Nowadays, in a majority of cases the medical school is a department of some university, where its buildings may or may not be in close proximity to the major academic and scientific departments.

It is the writer's feeling that notwithstanding the fact that the patient in the medical school hospital may reasonably be clinical material, the same careful planning should exist for his care as in an independent hospital, that is, privacy, an ideal exposure, and arrangement of rooms should not be sacrificed in the combination; for the going from classroom to bedside, provided there is physical connection between school and hospital, is a matter of minor importance in comparison with the privacy and comfort of the patient.

An editorial from the *Journal of the American Medical Association** is so apropos that it is quoted here in full:

"In the discussion of hospital problems, much interest has been shown recently in the educational function of such institutions. The hospital is a center for the instruction of nurses, of interns and sometimes of medical students. Another function frequently mentioned is that of investigation and research, whereby the hospital adds its quota to the advancement of our knowledge of medicine. In many places, also, the educational function of hospitals has been broadened to include the provision of special clinics, medical-pathologic conferences and other medical meetings for the staff and for physicians in the surrounding territory. Where competent teachers are available and clinics have been well developed, certain hospitals are now affiliated with graduate medical schools, so that physicians preparing themselves either for general practice or for specialization can obtain portions of their graduate preparations in these hospitals. Finally in their communities, through their patients, their staff, their nurses and social service workers. By these developments of their educational functions, hospitals are now wielding a great influence for good. The lack of hospitals has undoubtedly been a prominent factor in the abandonment of smaller rural communities by physicians, since well-to-do country people have been forced to go to larger towns and cities for hospital care. An increase in the number of modern hospitals, therefore, even though small, will help to bring a wider distribution of physicians. Through the further development of their educational functions, hospitals will enable these physicians to keep in constant touch with the modern developments and improved methods used in the diagnosis, treatment and prevention of disease. Thus the hospitals will help also to bring the benefits of these improved methods within the reach of a larger proportion of the public.”

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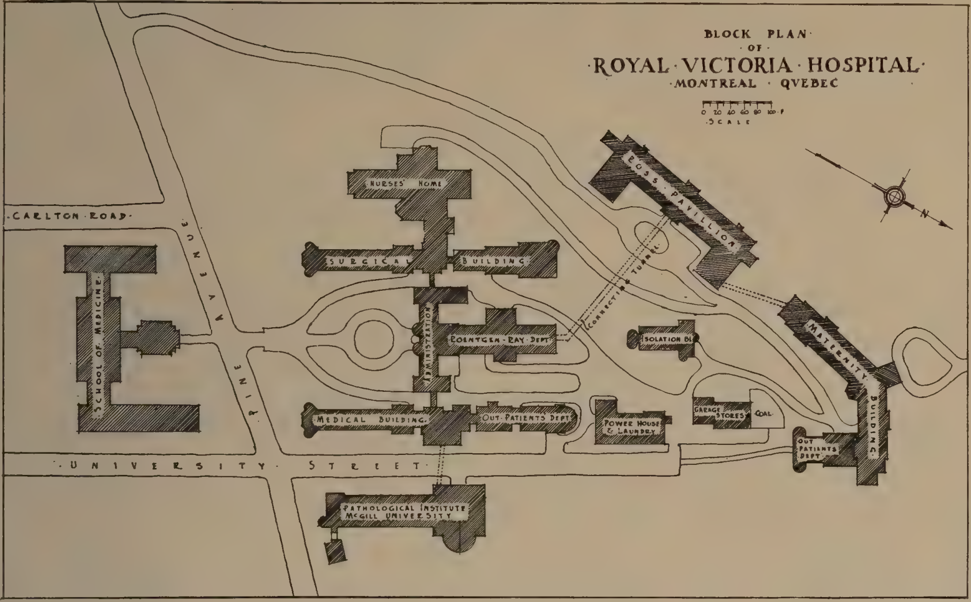
*Journal of the American Medical Association, March 28th, 1925.

Another eminent English authority in speaking of a certain large hospital said, “It lacked a soul because it was not connected with a medical school.”



The McGill University Medical School. In the case of the medical school of the McGill Universtiy (pages 114 and 115), which is allied with the Royal Victoria Hospital for the clinical teaching (See block plan above), the pathological building is placed across the street from the hospital building with a physical connection through an underground passage, affording ample passage for students and for carrying cadavers and specimens, as wall as for pipes and conduits.

This close proximity allows the laboratory work of the hospital to be carried on with greater facilities than would be the case if a local laboratory were used.

The plan is self-explanatory. The autopsy section is in close proximity with the work rooms; the teaching laboratory designed so as to get the best light and air.

The Vanderbilt University. The description of the plans (see pages 116 and 117), here quoted is from the Journal of the American Medical Association.*

“A problem of educational policy has been the question of bringing the laboratories and the hospitals of the school into the closest possible contact. In order to accomplish this, it was decided to connect the laboratories and hospital so that in reality they constitute one building. The laboratories form three sides of a court facing north and opening toward the main campus of the university, while the hospital forms a similar group opening toward the south. These two groups are joined by the laboratories of the clinical departments, arranged in such a way that the type of work conducted in each one will be carried on in close proximity to the laboratory most closely allied to it. Thus, the laboratory of clinical bacteriology adjoins the main laboratory of bacteriology, that of surgery adjoins

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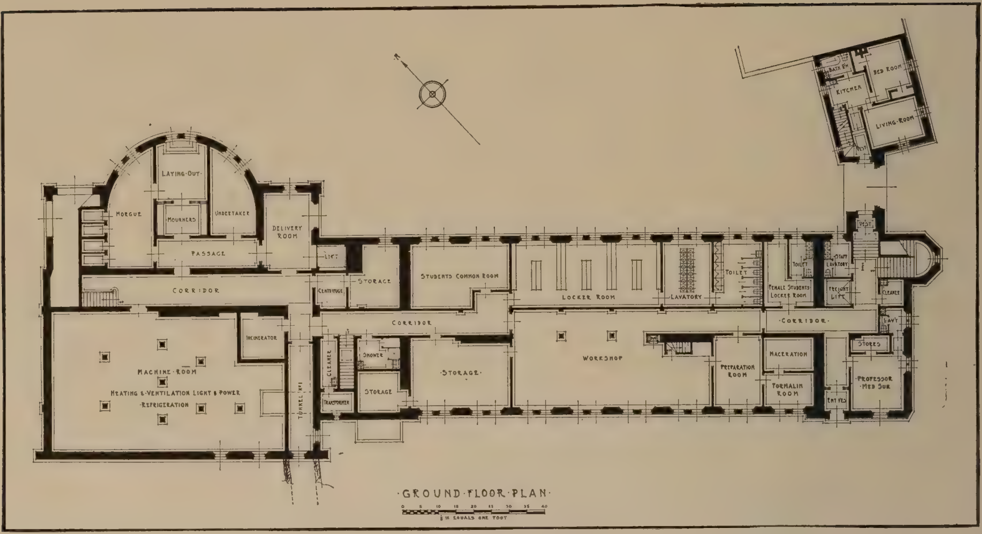
*The Relation of Medical Education to the Medical Plant. By G. Canby Robinson, M.D. Vol. 81, pp. 321-323.

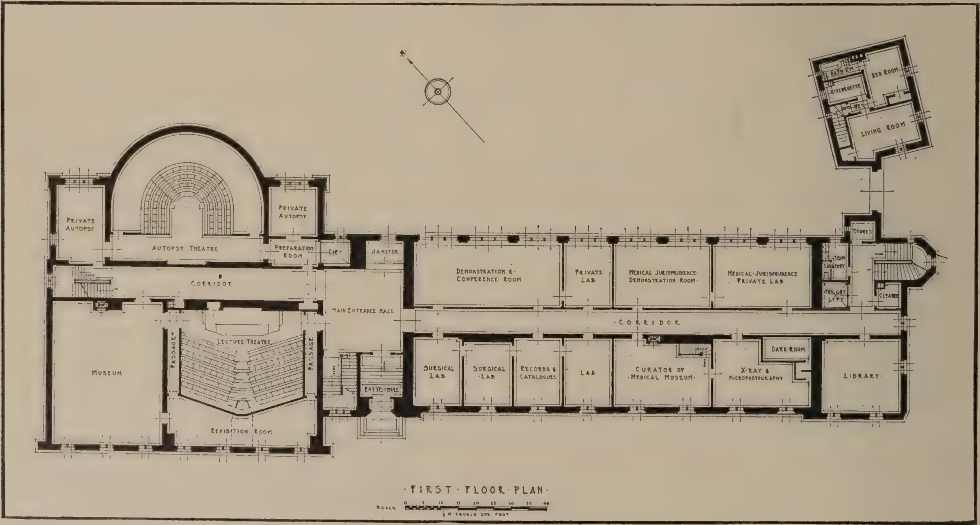


PATHOLOGICAL BUILDING, McGILL UNIVERSITY, MONTREAL, CANADA
Nobbs & Hyde, Architects; Ramsay Traquair and William Carless, Associate Architects
Stevens & Lee, Consulting Architects

anatomy, and that of clinical chemistry and physiology adjoins those of biologic chemistry, pharmacology and physiology.

By such assignment of space it is hoped that the barrier between the laboratory and the clinical departments will be eliminated, and that the influences of the fundamental sciences will be felt constantly by the clinical staff and by the students throughout their entire course, so that the knowledge and training gained in the laboratories will be carried forward into the practice of medicine.

"Another educational feature expressed in the building plan of the Vanderbilt University school is the position of the



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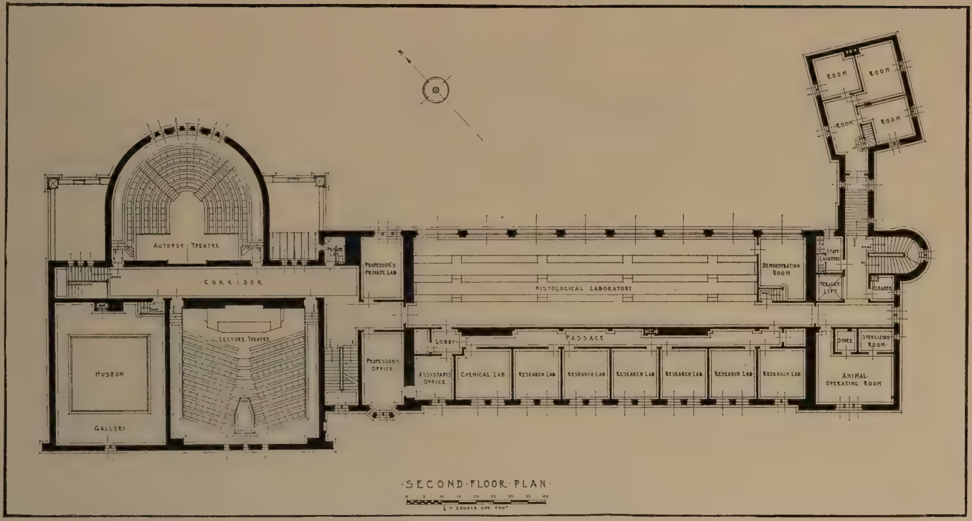
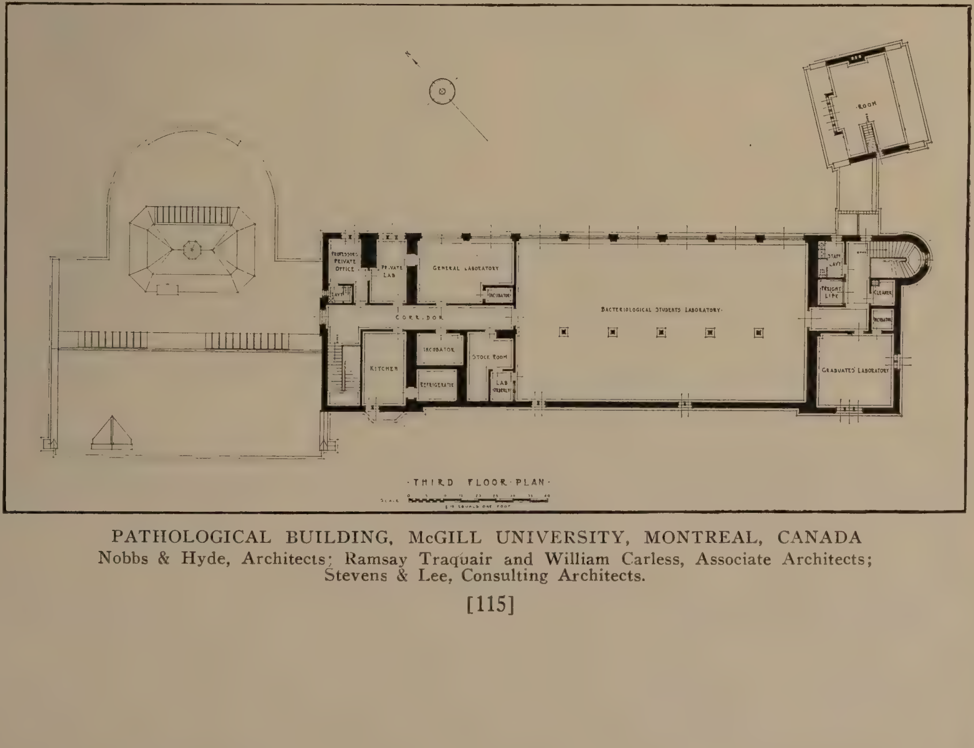


PATHOLOGICAL BUILDING, McGILL UNIVERSITY, MONTREAL, CANADA
Nobbs & Hyde, Architects; Ramsay Traquair and William Carless, Associate Architects;
Stevens & Lee, Consulting Architects.

library and museum. The library occupies a central position on the first floor, almost analogous to the hub of a wheel, and no provision for departmental libraries has been made. Stack room on the main floor for approximately thirty-six thousand volumes is provided, with additional room for about fourteen thousand volumes immediately below. The reading room adjoining the stack room will accommodate about seventy readers, and two small studies for intensive literary work are provided. The museum is placed opposite the main entrance of the laboratories.

"The admitting office of the hospital



PATHOLOGICAL BUILDING, McGILL UNIVERSITY, MONTREAL, CANADA
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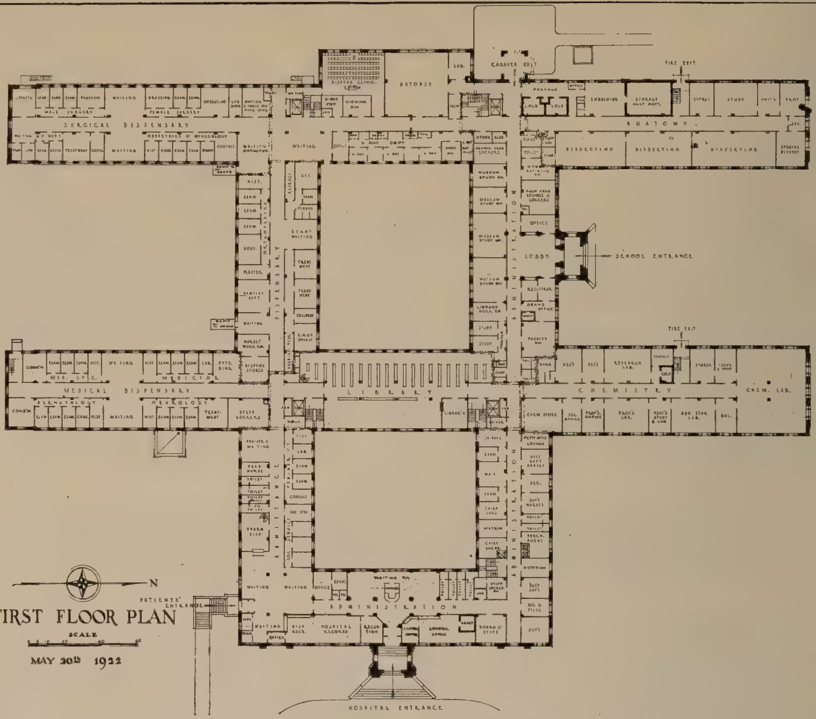
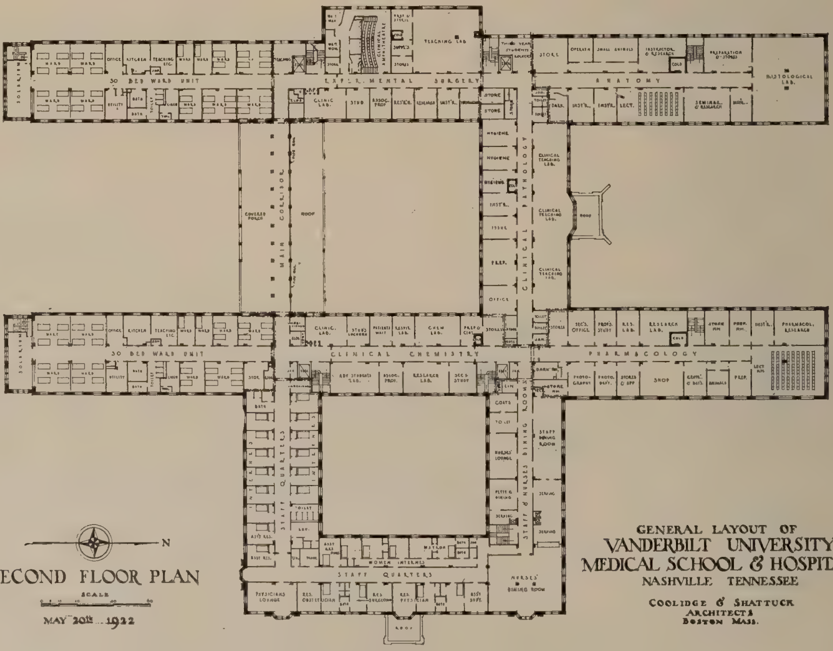


FIRST FLOOR PLAN

SCALE

MAY 20th 1922



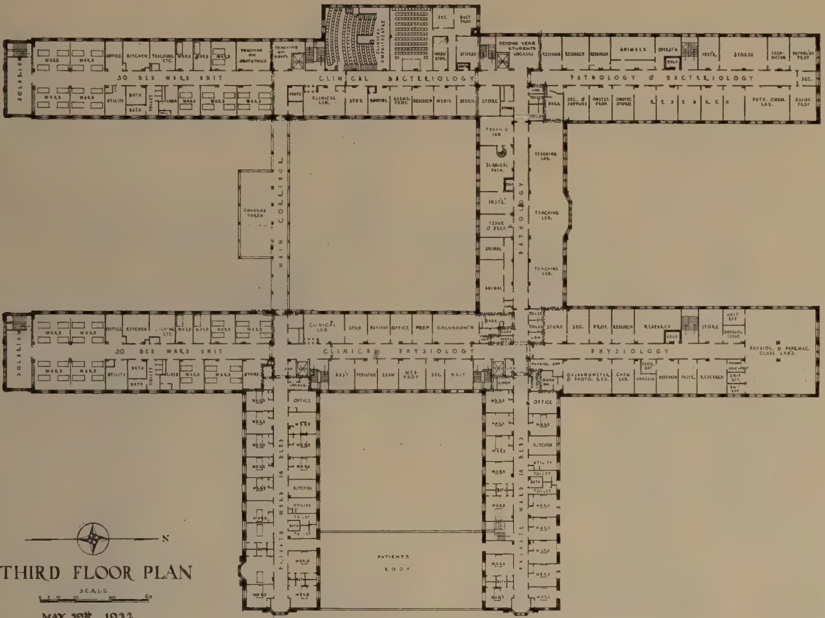
SECOND FLOOR PLAN

SCALE

MAY 20th 1922

GENERAL LAYOUT OF
VANDERBILT UNIVERSITY
MEDICAL SCHOOL & HOSPITAL
NASHVILLE TENNESSEE

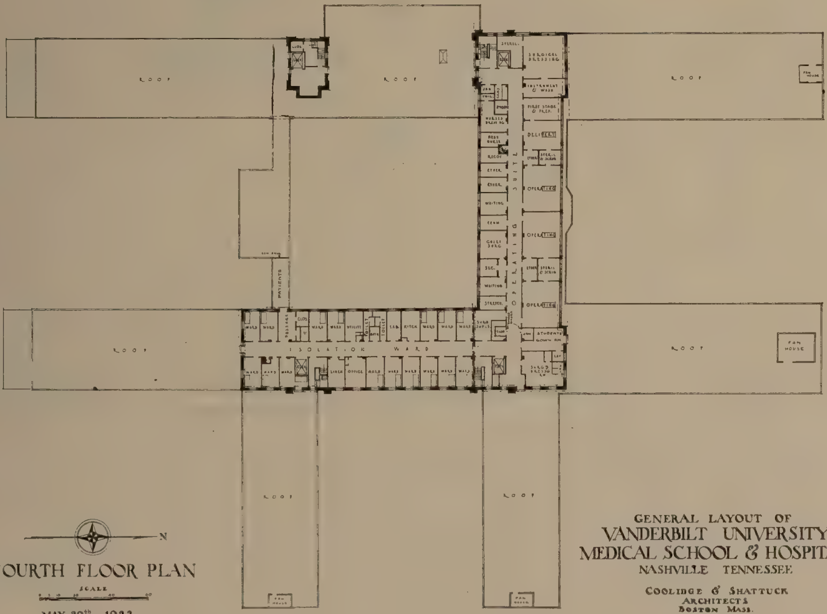
COOLIDGE & SHATTUCK
ARCHITECTS
BOSTON MASS.



THIRD FLOOR PLAN

SCALE

MAY 20th 1922



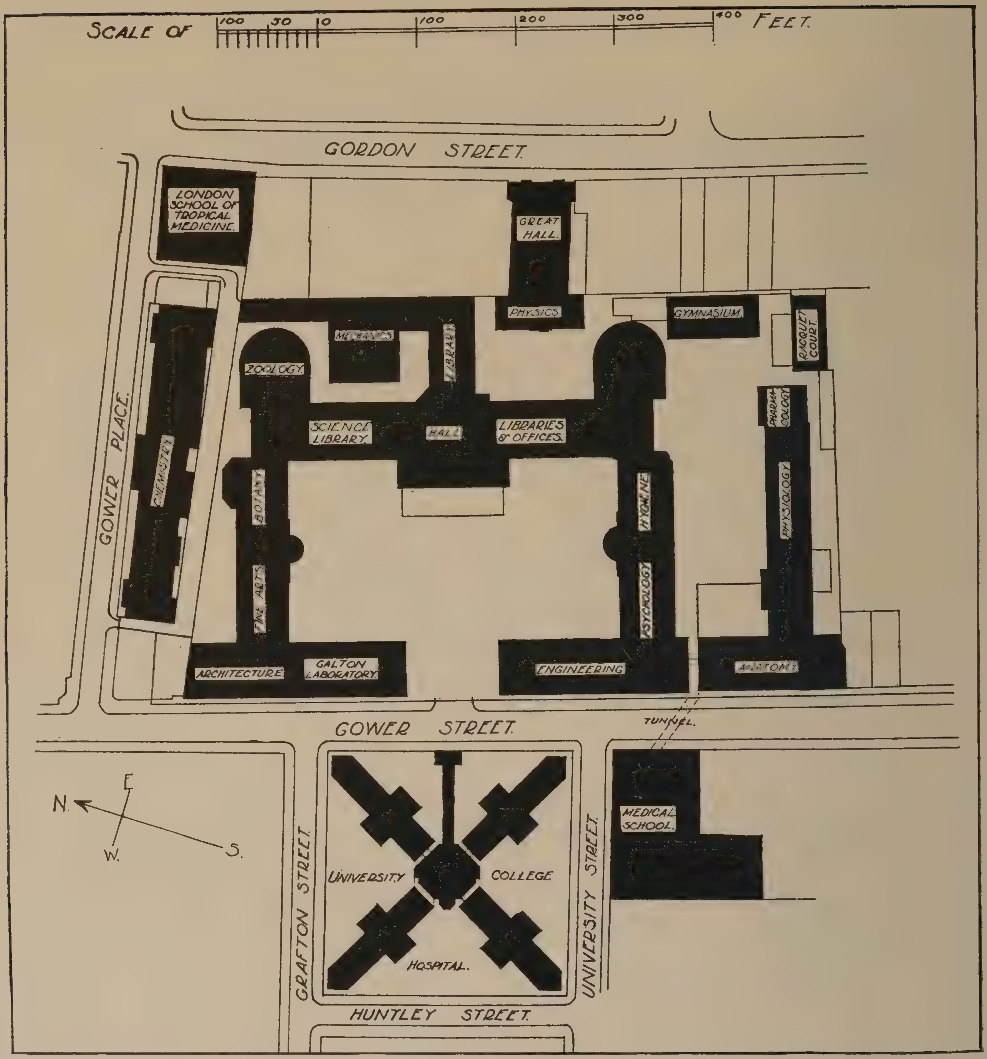
FOURTH FLOOR PLAN

SCALE

MAY 20th 1922

GENERAL LAYOUT OF
VANDERBILT UNIVERSITY
MEDICAL SCHOOL & HOSPITAL
NASHVILLE TENNESSEE

COOLIDGE & SHATTUCK
ARCHITECTS
BOSTON MASS.



BLOCK PLAN OF UNIVERSITY COLLEGE, LONDON
F. M. Simpson, F.R.I.B.A., Architect

adjoins the main entrance hall of the dispensary, in which are rooms for the social service department, the staff of which will be readily accessible to patients being admitted to the hospital or to patients attending the outpatient department. A prominent place is given to the social service department, not only because of the great humanitarian value of a properly conducted hospital social service, but also with the belief that it is a valuable asset in medical education.

"The hospital wards represent a departure from the large wards in general use in this country. A ward unit is composed of thirty beds, but these are so distributed that not more than four patients are in a single space. The main part of the ward, which leads to a closed porch, contains sixteen beds, but this is in turn subdivided by two partitions and a wide corridor.

"No large operating amphitheatre has been provided, but the operating rooms have been made large enough so that groups of students can attend operations, thus expressing another policy of medical education now generally regarded as sound.

"The hospital will contain approximately one hundred and seventy beds, twenty-seven of which are arranged for patients paying professional fees. Sixteen beds are devoted to contagious cases. This is a small number of beds for educational purposes, but it constitutes a hospital as large as can be well maintained with the funds available for this purpose."

In the case of the *University College Hospital in London* (page 118) the medical school is across the street from the hospital and it has underground connection with the main University group.

Research and Educational Hospitals of the State of Illinois. The State Department of Public Welfare and the Illinois State University agreed "to construct and maintain a group of research and educational hospitals in the medical center of Chicago where the best medical, surgical and laboratory skill can be readily obtained; to provide medical treatment for the indigent sick of the State; to give young men and women proper medical education and training that will enable them to become active soldiers in the welfare for the prevention as well as the cure of disease; to help practicing physicians of the State to keep in touch with the latest and best methods of preventing and curing human ailments; to tell the people of the State how to keep themselves physically fit."*

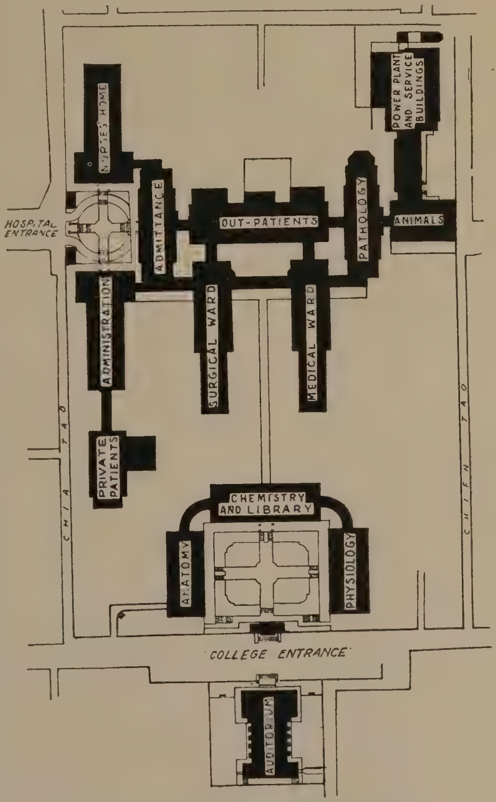
This group will provide for education and research work, for diagnosis and treatment for a large body of patients, as well as for the training of nurses and social workers.

Such state and city institutions as this should be provided in every state. The plot plan on page 120 shows the portion of the work now completed and the contemplated portion, and the perspective (page 121) shows the finished institution.

In the layout of the *Peking University Medical College,* the medical school building is slightly removed from the hospital group, but with a corridor connection to the center of the hospital group, and it will be noted that the pathology building functions directly with the main hospital.

The problem of the combination school and hospital is solved in a very comprehensive way in the *University of Colorado School of Medicine and Hospital* (pages 122 and 123). Designed with flexibility both as to the hospital and medical school unit, there is provision in every case for possible changes in the technique and administration. The group comprises general hospital, out-patient department and medical school, as well as residence and school for nurses.

The medical school was originally planned to accommodate two hundred students, with units so placed that the departments might be changed in size as the method of teaching might demand.



PEKING UNION MEDICAL COLLEGE

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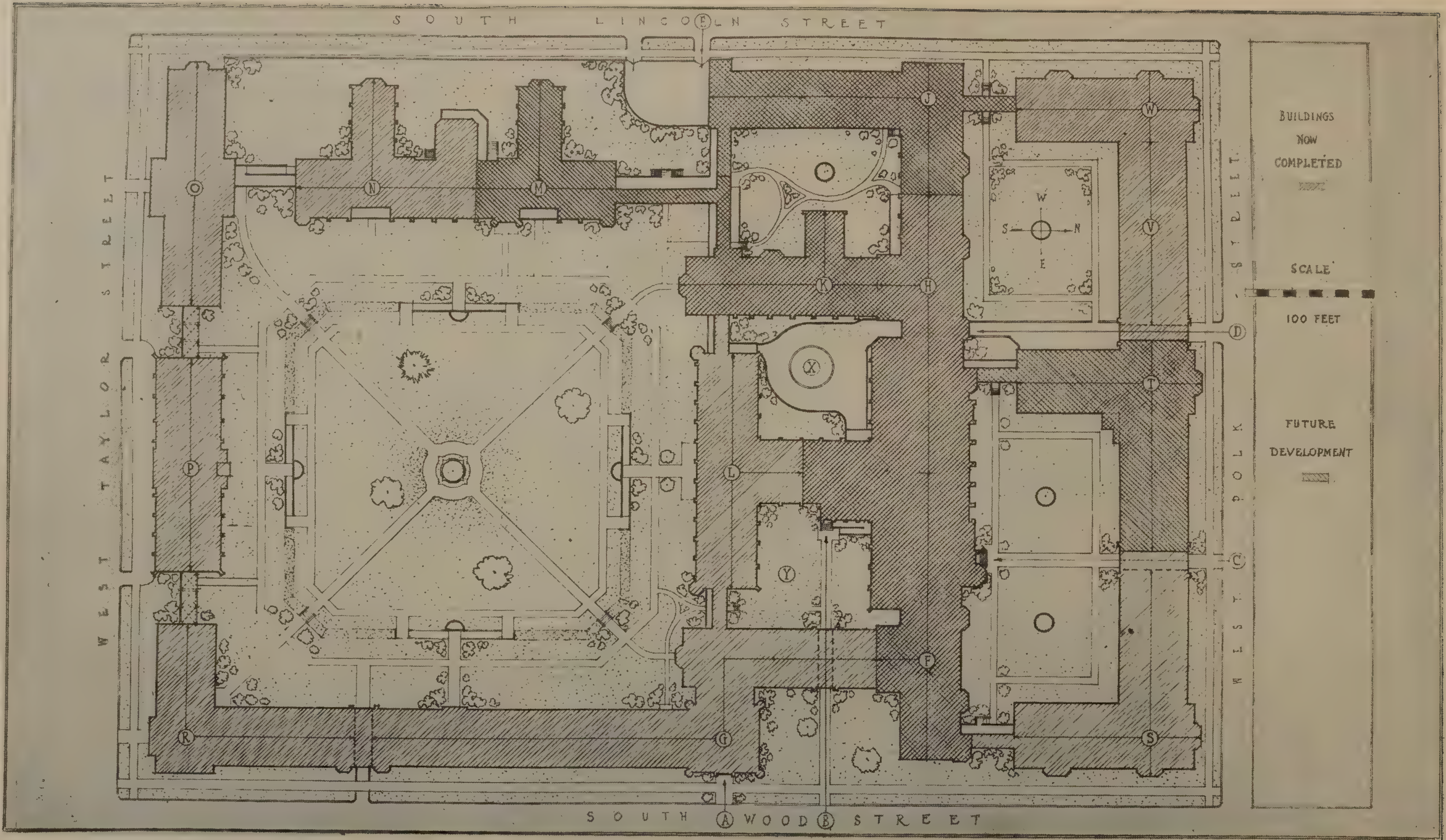
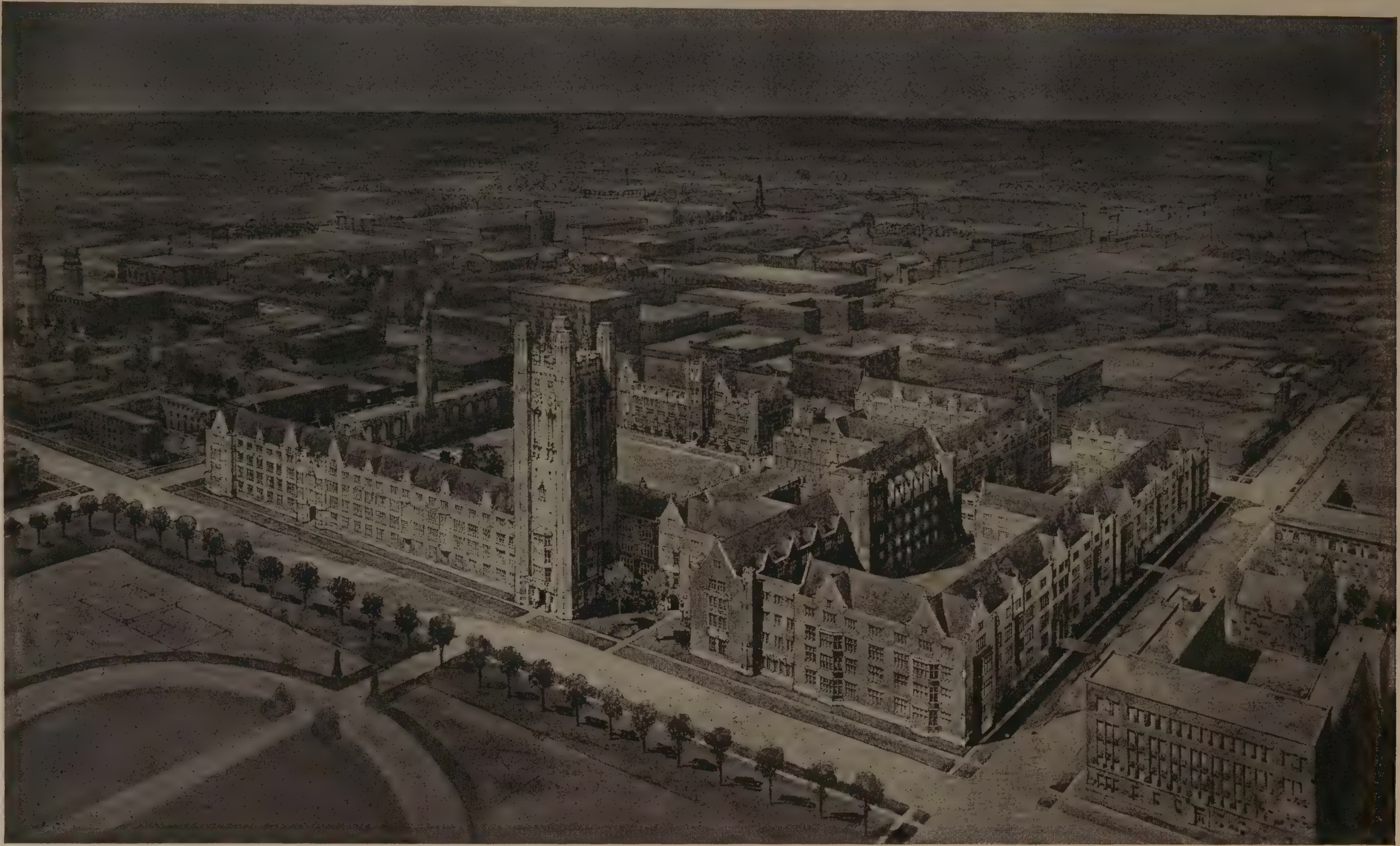
*The Architectural Record, October, 1925. Pages 301, 302 and 303.



PLOT PLAN OF THE RESEARCH AND EDUCATIONAL HOSPITALS OF THE STATE OF ILLINOIS, CHICAGO

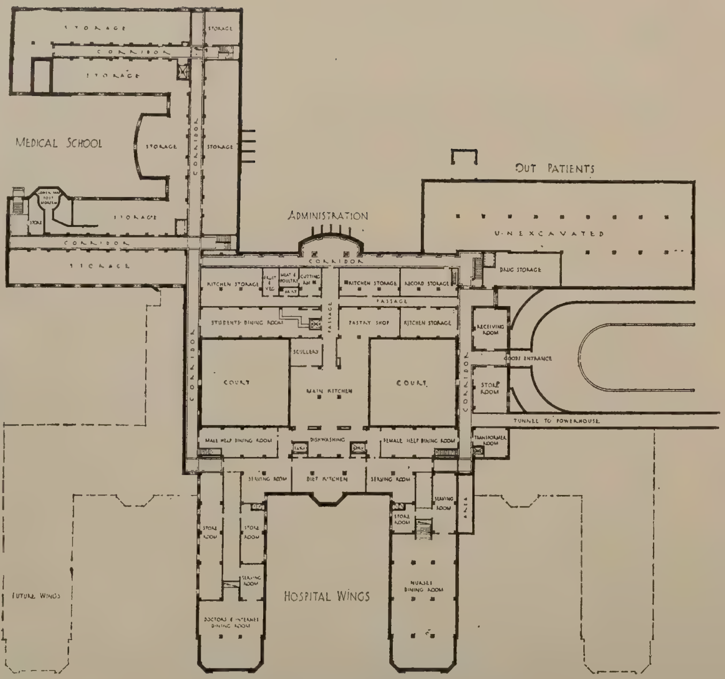
Richard E. Schmidt, Garden & Martin, Architects

(A) Administration Entrance. (B) Out-Patients' Entrance. (C) Students' and Nurses' Entrance. (D) Ambulance Entrance. (E) Kitchen Entrance. (F) Clinical Institute. (G) Extension of Clinical Institute. (H) Eye and Ear Infirmary. (J) Extension of Eye and Ear Infirmary. (K) Psychiatric Institute. (L) Administration Building. (M) Orthopedic Institute. (N) Extension of Orthopedic Institute. (O) Infectious Diseases. (P) Power Plant. (R) Venereal Diseases. (S) Research Institute. (T) Library Class Rooms and Research Laboratories. (V) Class Rooms and Laboratories. (W) Dental Institute. (X) Ambulance Court. (Y) Dispensary Court.

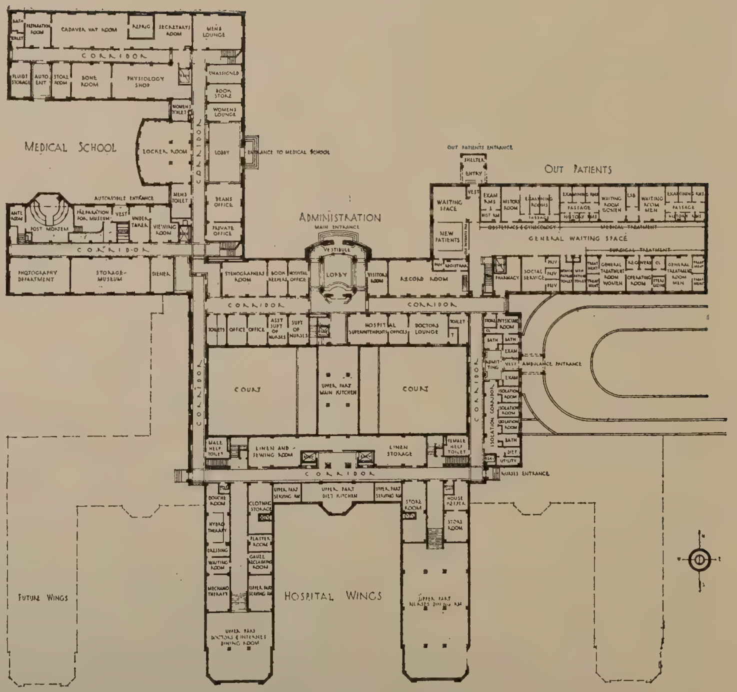


PERSPECTIVE VIEW OF THE RESEARCH AND EDUCATIONAL HOSPITALS OF THE STATE OF ILLINOIS, CHIGAGO

Richard E. Schmidt, Garden & Martin, Architects

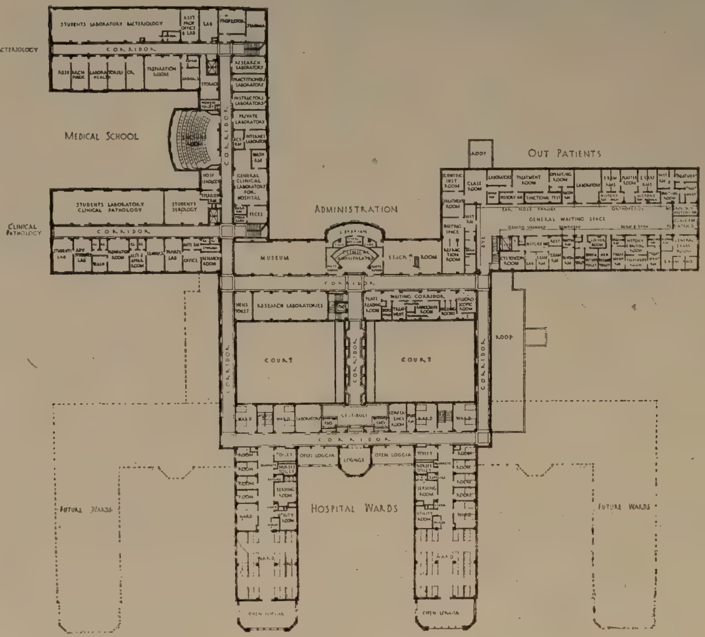


Basement Floor Plan

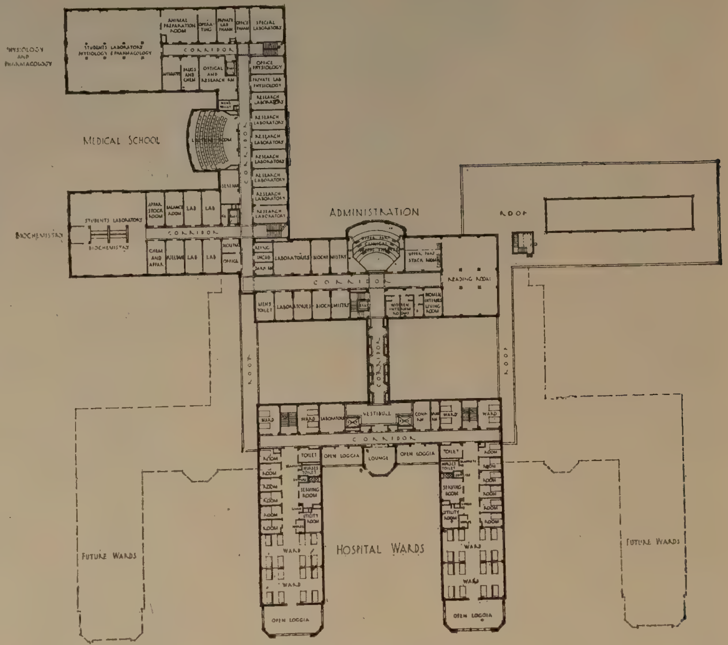


Ground Floor Plan

THE UNIVERSITY OF COLORADO SCHOOL OF MEDICINE AND HOSPITAL AT DENVER, COLORADO

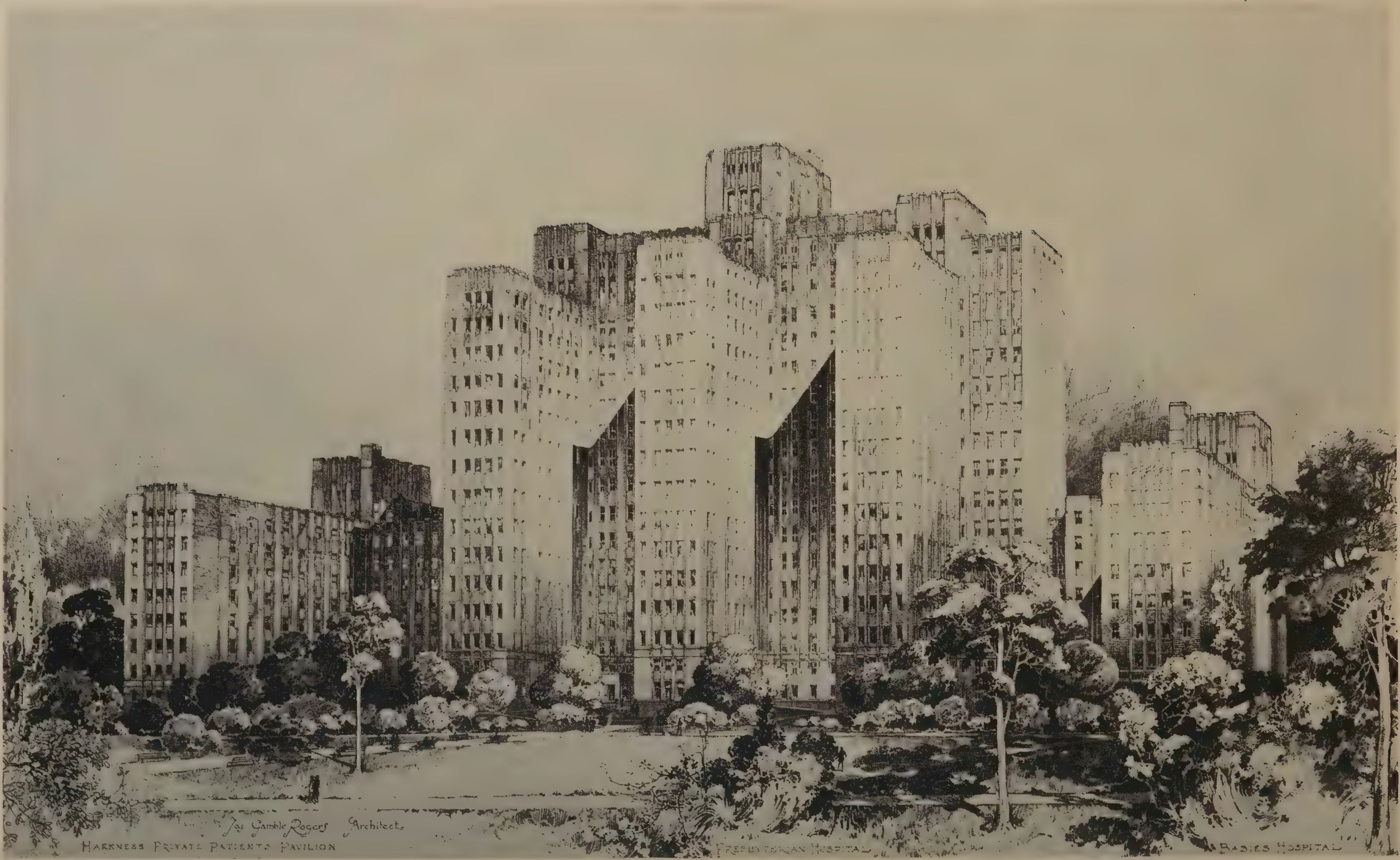


First Floor Plan



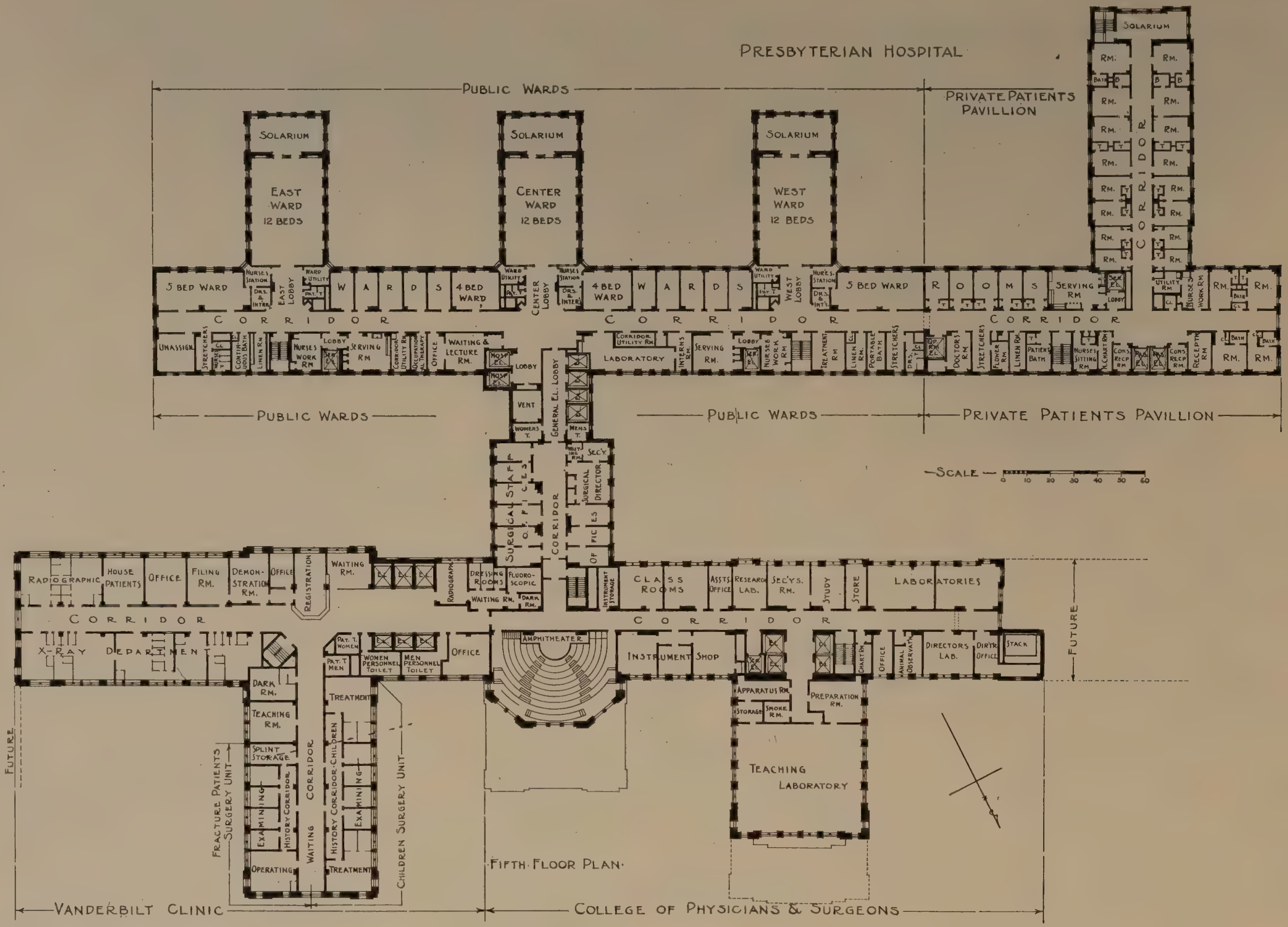
Second Floor Plan

THE UNIVERSITY OF COLORADO SCHOOL OF MEDICINE AND HOSPITAL AT DENVER, COLORADO

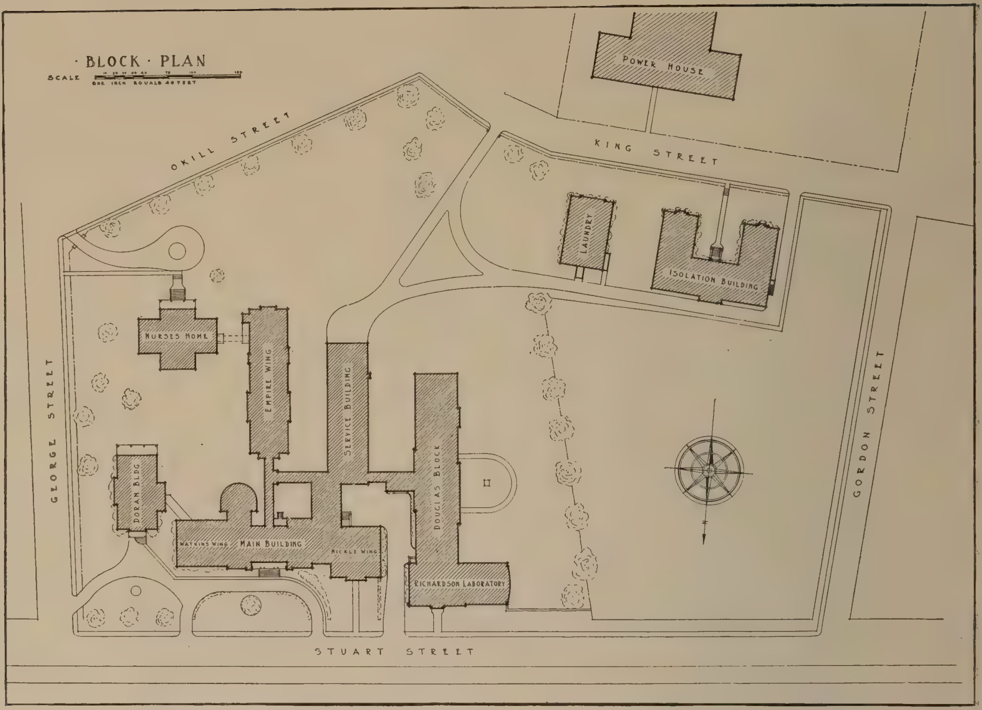

Jas Gamble Rogers Architect
Harkness Private Patients Pavilion
Presbyterian Hospital
Babies Hospital

PRESBYTERIAN HOSPITAL

Columbia-Presbyterian Medical Center, New York City
Jas. Gamble Rogers, Architect

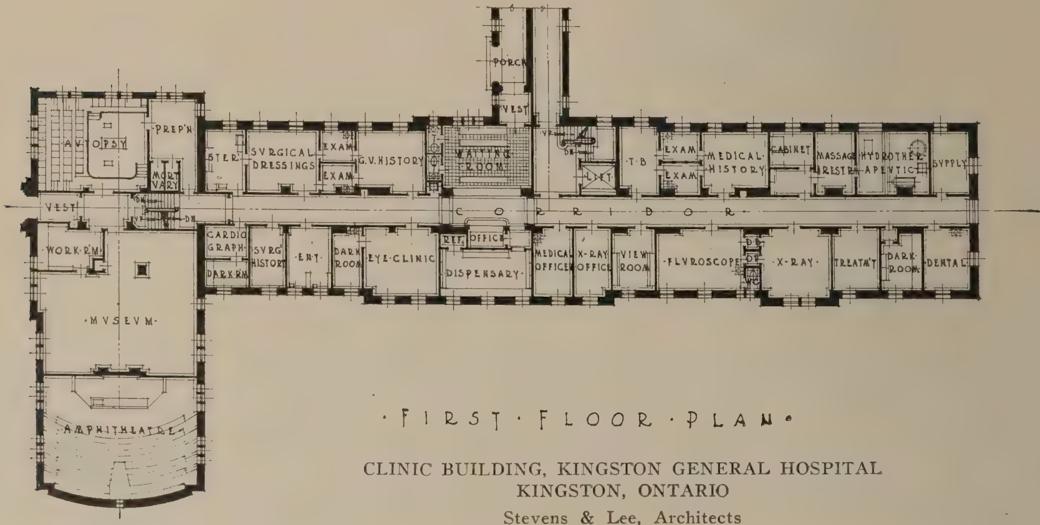


COLUMBIA-PRESBYTERIAN MEDICAL CENTER, NEW YORK CITY
Jas. Gamble Rogers, Architect

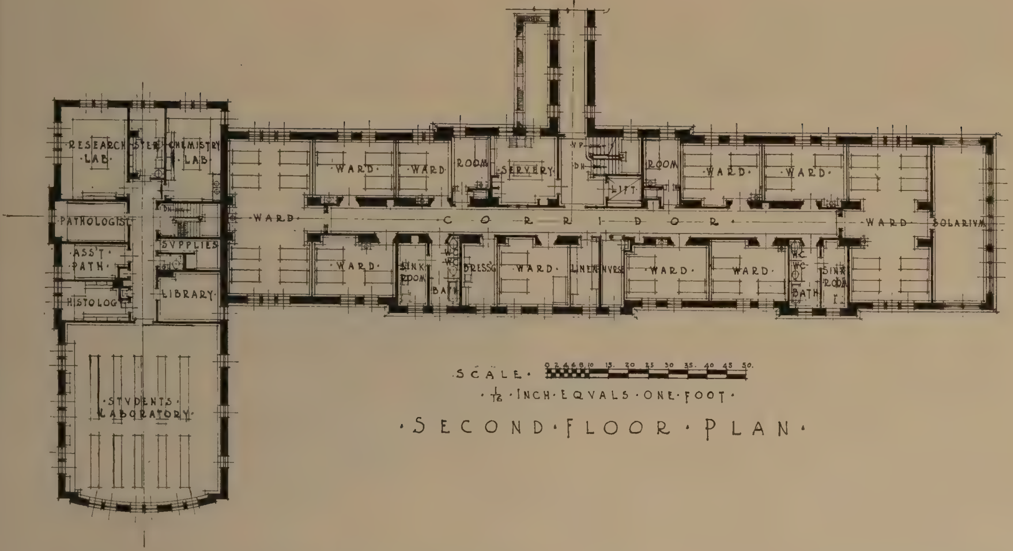


KINGSTON GENERAL HOSPITAL, KINGSTON, ONTARIO
Stevens & Lee, Architects

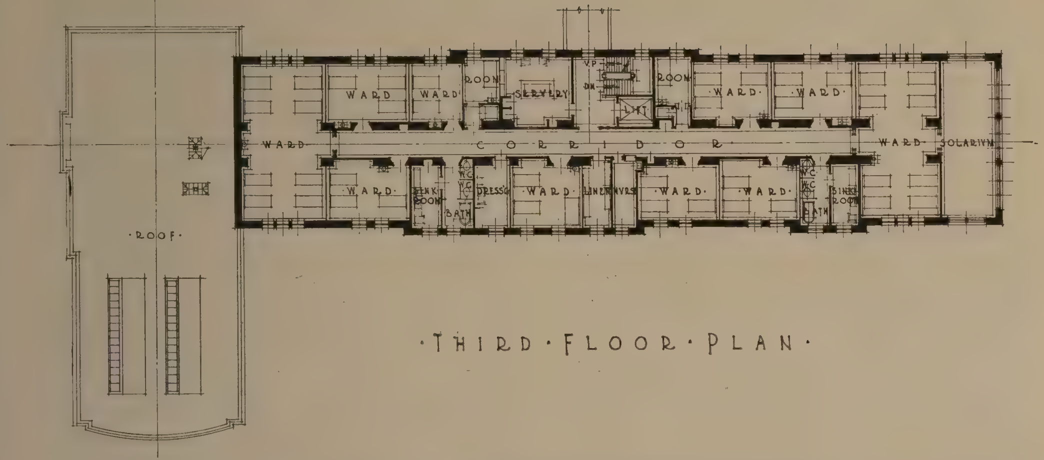
The hospital is designed for free patients and is well cut off from the administration building, although physically connected with it on each floor by corridors and thus with the school. It will be noted that the Rigs type of ward is pretty largely used for the larger units. These afford flexibility and provide for



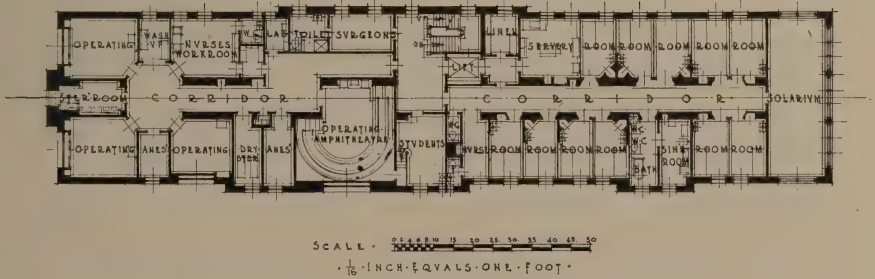
CLINIC BUILDING, KINGSTON GENERAL HOSPITAL
KINGSTON, ONTARIO
Stevens & Lee, Architects



·SECOND·FLOOR·PLAN·



·THIRD·FLOOR·PLAN·



·FOVRTH·FLOOR·PLAN·

CLINIC BUILDING, KINGSTON GENERAL HOSPITAL, KINGSTON, ONTARIO
Stevens & Lee, Architects

easy transition from large to small wards.

The location of the hospital units was carefully studied by the architect to insure the maximum amount of sunlight and air.

The original plans called for two pavilions of three stories each affording a capacity of one hundred fifty beds, which can be increased to three hundred beds by the addition of three stories on each building; or with complete pavilions as indicated on the plan, accommodations can be secured for six hundred beds.

The operating department is on the fourth floor of the administration building within easy access of both the hospital and the medical school.

From a careful study of the plans one will note the intimate relation of one department to the other; they are so planned that each department may function independently or in co-relation to the other.

One of the greatest developments of the medical school and hospital combinations in this country is the combination of the *College of Physicians and Surgeons of the Columbia University,* the *Presbyterian Hospital*, and the *Vanderbilt Clinic* (pages 124 and 125)) which buildings are being erected at the time of writing. These departments are being housed in multi-story buildings at Broadway and 165th Street,—one of the most magnificent sites in New York overlooking the Hudson River, with every prospect of being the most complete medical unit under one large comprehensive scheme in this country, and perhaps in the world.

Unlike many of the others described in this chapter, the institutions of the group, while functioning as complete units, will not lose their individual identities; hence the Presbyteran Hospital, which is widely known for its wonderful and progressive work, will function as a hospital both for public and private patients; and with the physical connection on the eleven stories of the hospital building to the units of the medical school and the Vanderbilt clinic all will combine to provide clinical material for the medical school.

In a glance at the typical plan on page 125, it will be noted that while there is a physical connection between the medical school, the clinic unit and the hospital, in order to go from one department to another one must pass through the administrative unit of the hospital floor, thus guarding very largely the privacy of the hospital. The private patients' pavilion is placed at a distance from the center and so affords still greater privacy.

The lecture rooms or clinical amphitheatres are placed midway between the medical school, the Vanderbilt clinic and the hospital, thus affording easy access to each unit.

The new *clinic building* of the *Kingston General Hospital* (pages 126 and 127), which is closely connected with that institution (see block plan on page 126), fulfills a triple need: as out-patient department for the institution, ward building for public patients, and laboratory and lecture room for the medical department of Queen's University.

The laboratory section is two stories in height and contains a students' general laboratory, as well as research laboratory, a large lecture hall or amphitheatre, and autopsy department.

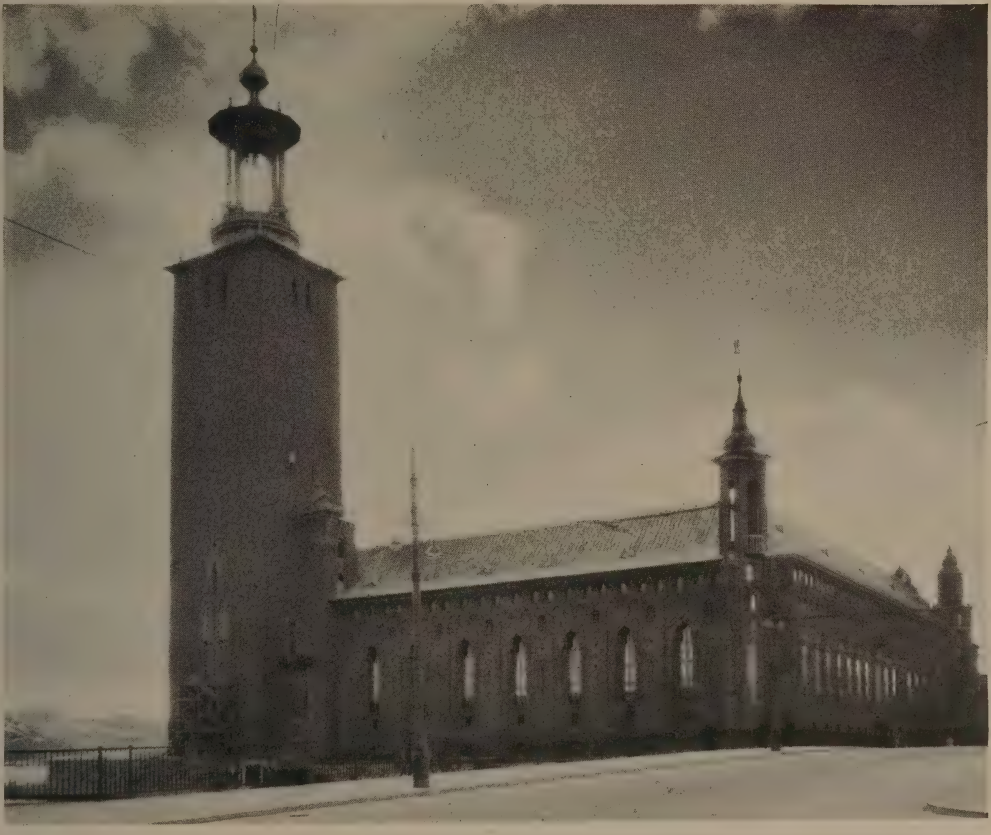
The out-patient department which occupies the entire first floor of the patients' building functions in the usual way, with its various departments, including X-ray and physio-therapy. The second and third stories are occupied by ward patients, with the necessary offices and utilities. On the fourth floor is the operating department for the entire hospital, with three major operating rooms and a large amphitheatre for the use of the university students. On this floor also are the private rooms in a section removed from the operating department.

This building functions,

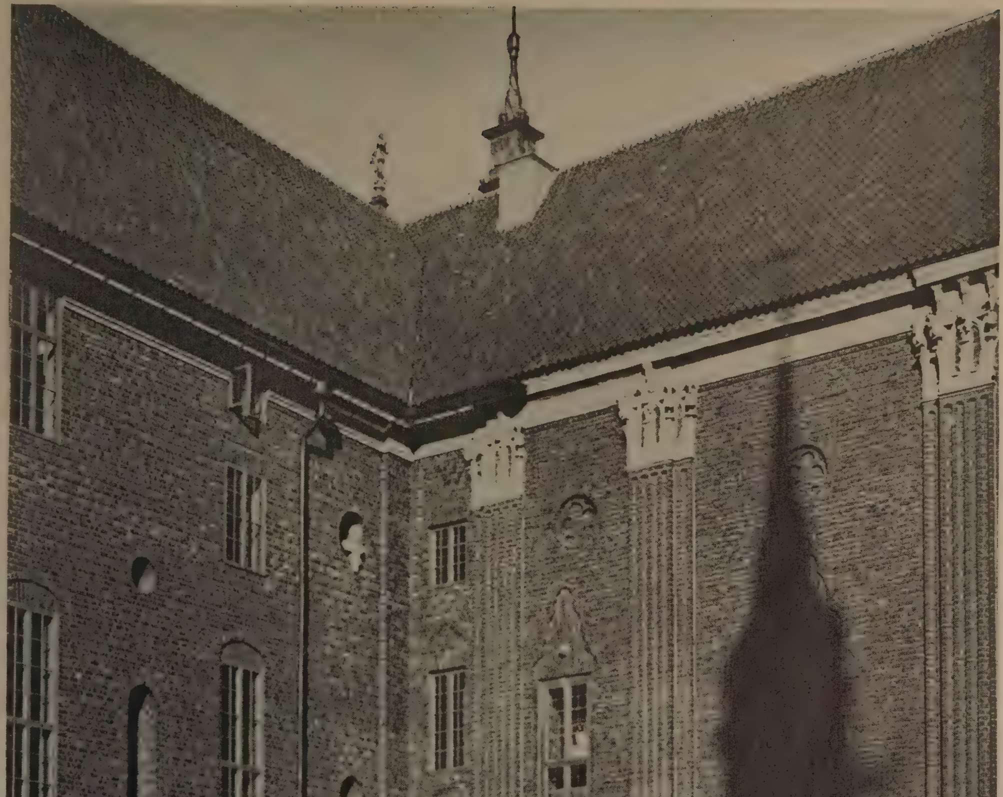
1st. For University pathological work and lecture rooms.
2nd. For out-patient, X-ray and Physio-therapy departments.
3rd. For ward patients.
4th. For operating department.
5th. For private patients.

A PORTFOLIO OF CVRRENT ARCHITECTVRE IN DENMARK & SWEDEN

Photographs Taken or
Selected by Sigurd Fischer

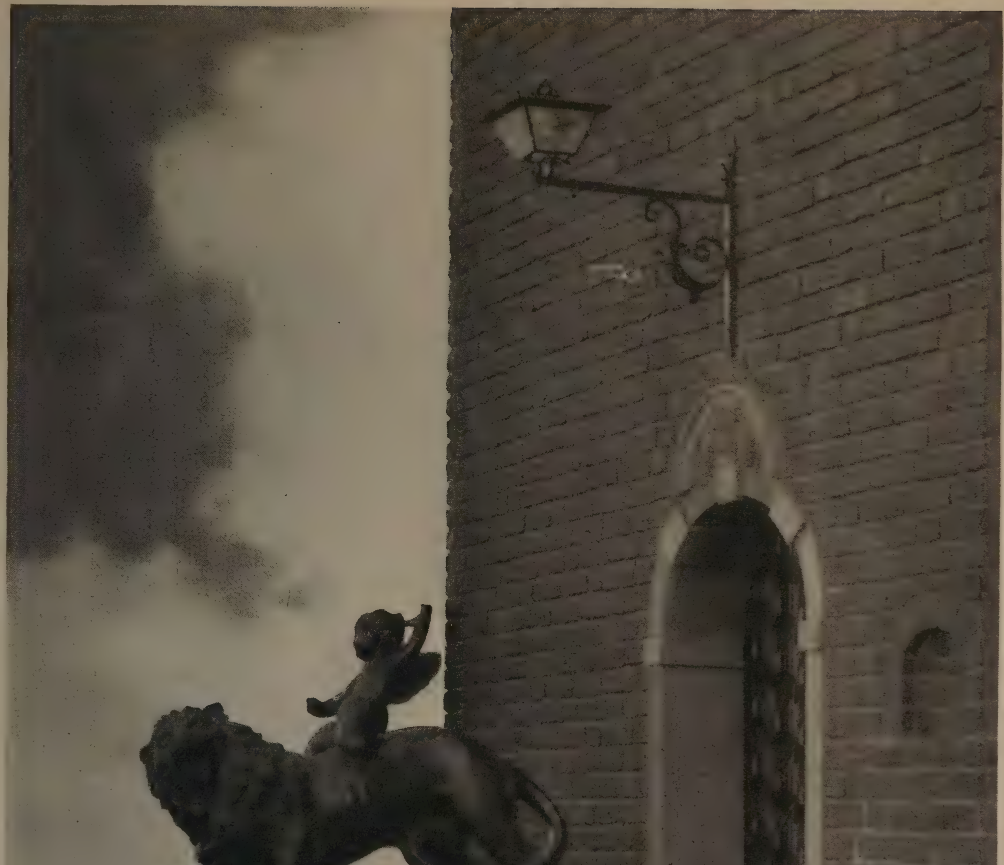


THE NEW CITY HALL, STOCKHOLM, SWEDEN
Ragnar Östberg, Architect

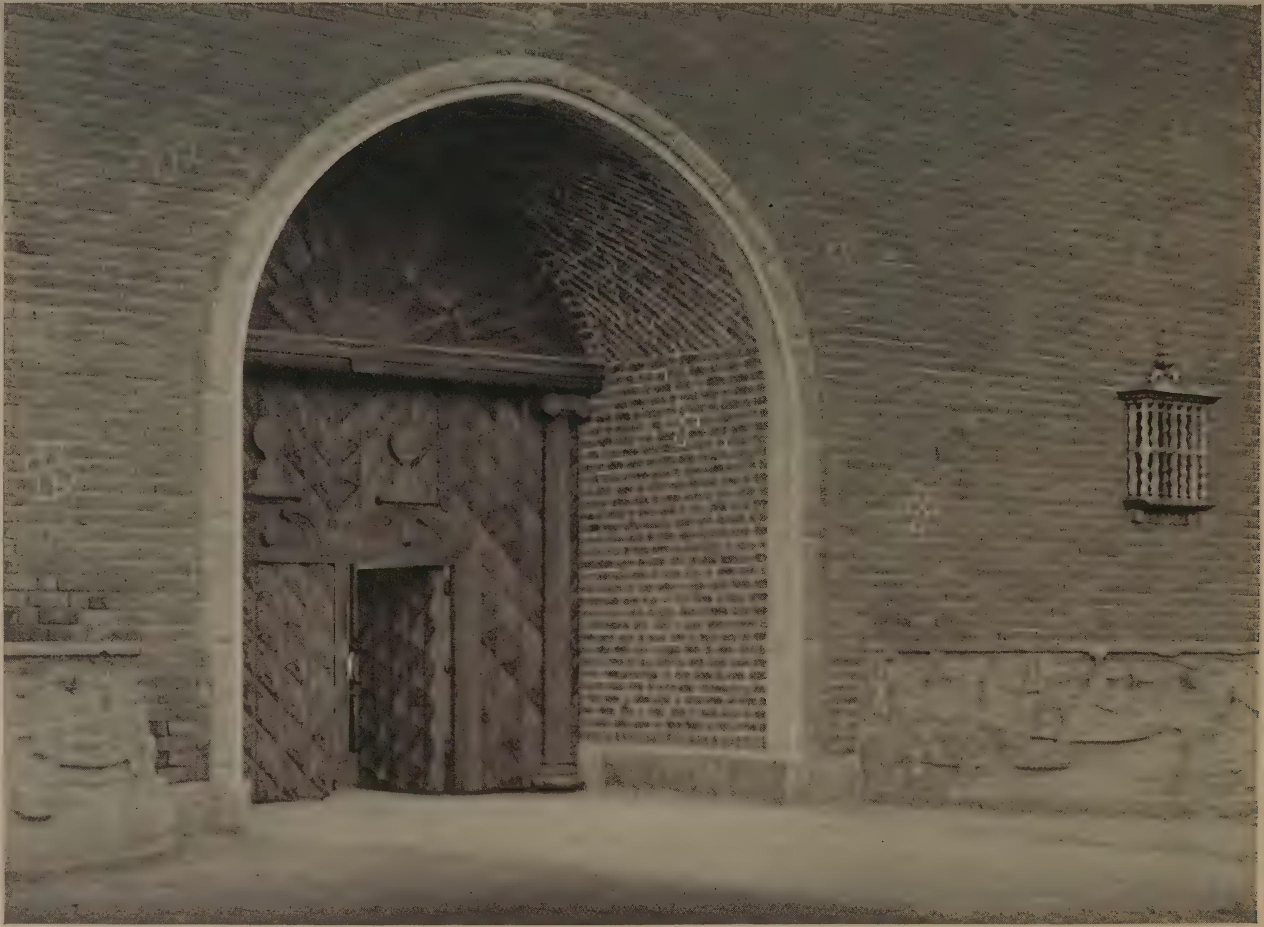


Detail of Corner in Open Court

THE NEW CITY HALL, STOCKHOLM, SWEDEN
Ragnar Östberg, Architect



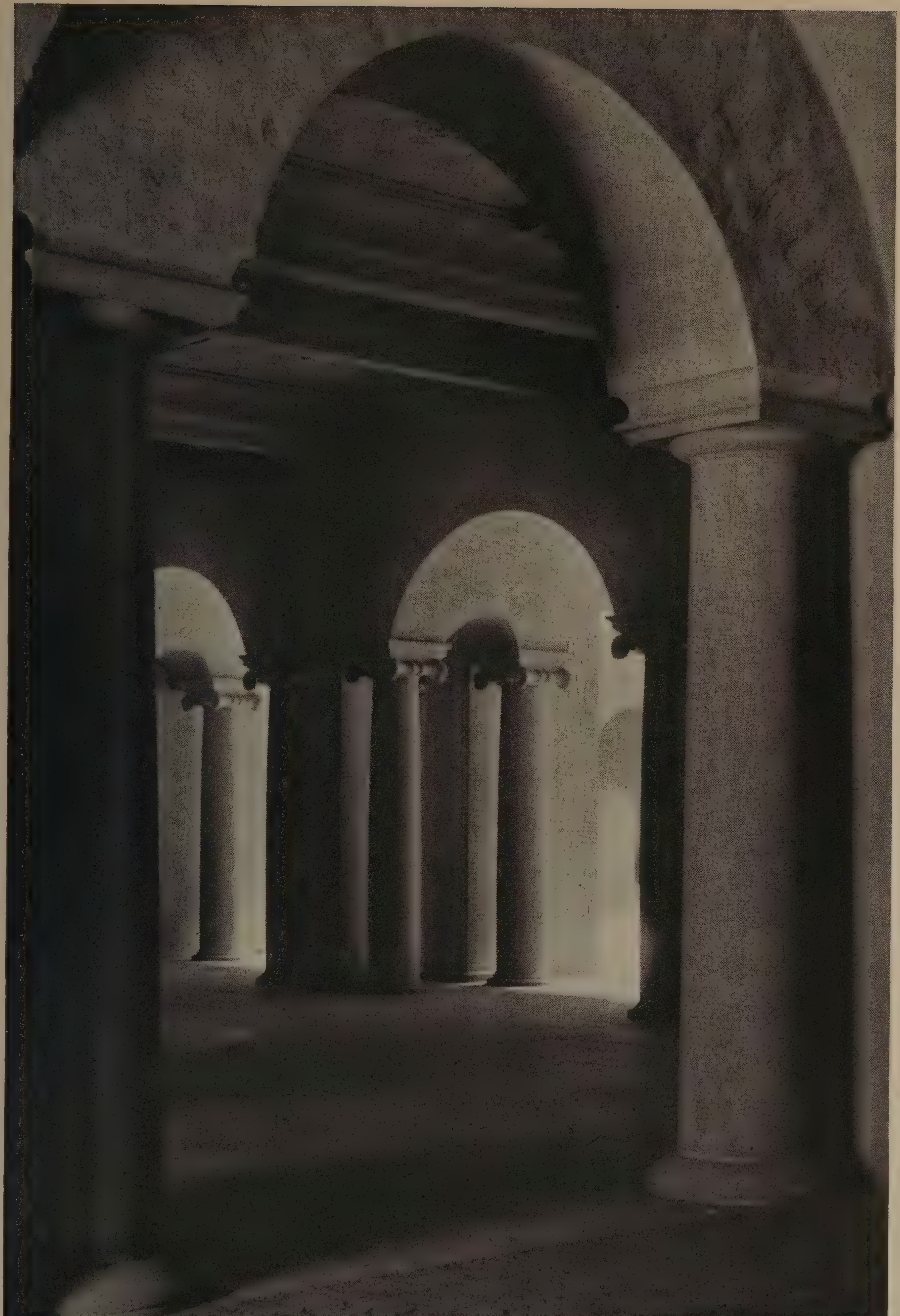
Detail at Entrance to City Hall Restaurant
THE NEW CITY HALL, STOCKHOLM, SWEDEN
Ragnar Ostberg, Architect



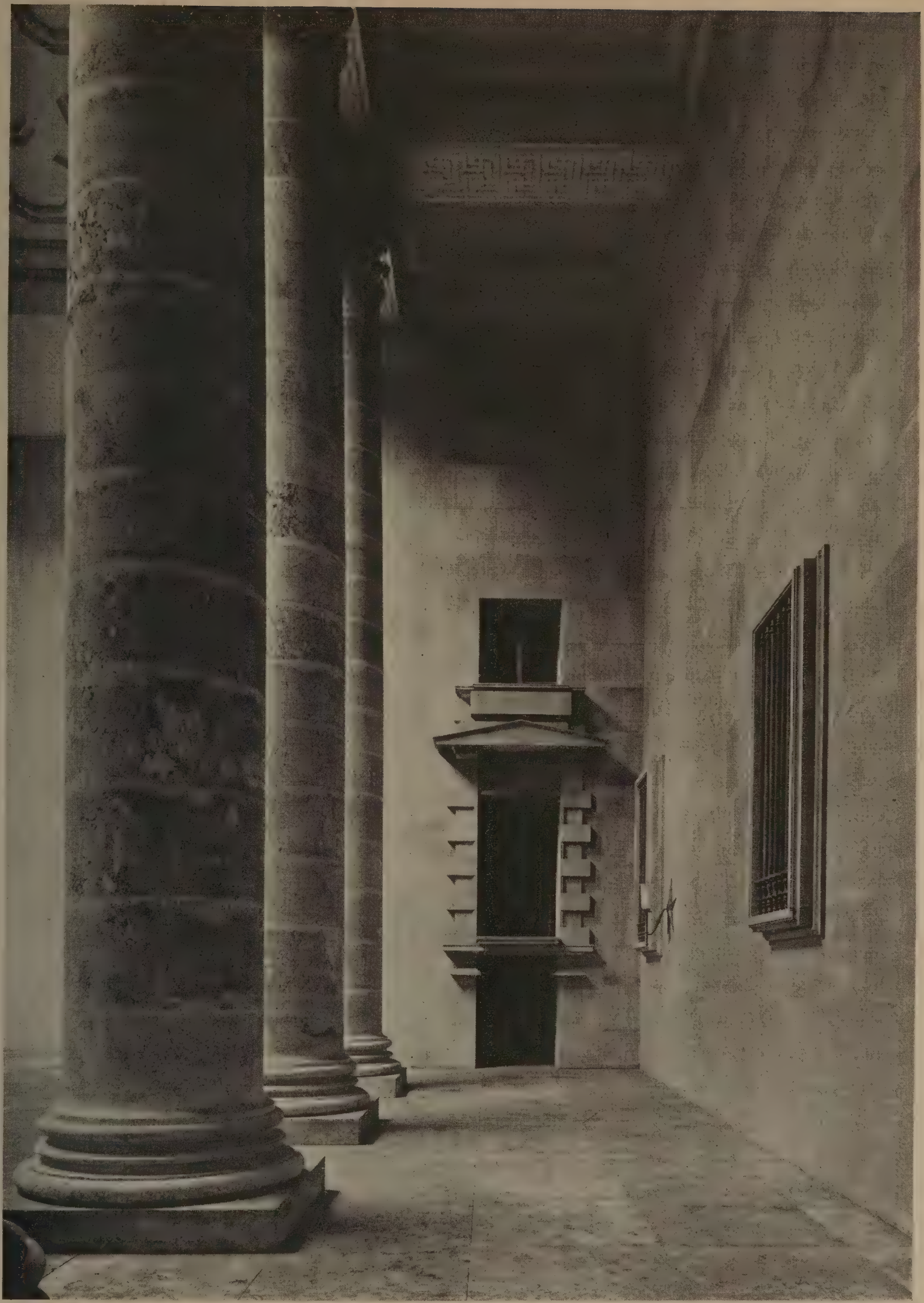
Main Entrance Door

THE NEW CITY HALL, STOCKHOLM, SWEDEN

Ragnar Östberg, Architect



Colonnade in "Blue" Court
THE NEW CITY HALL, STOCKHOLM, SWEDEN
Ragnar Östberg, Architect



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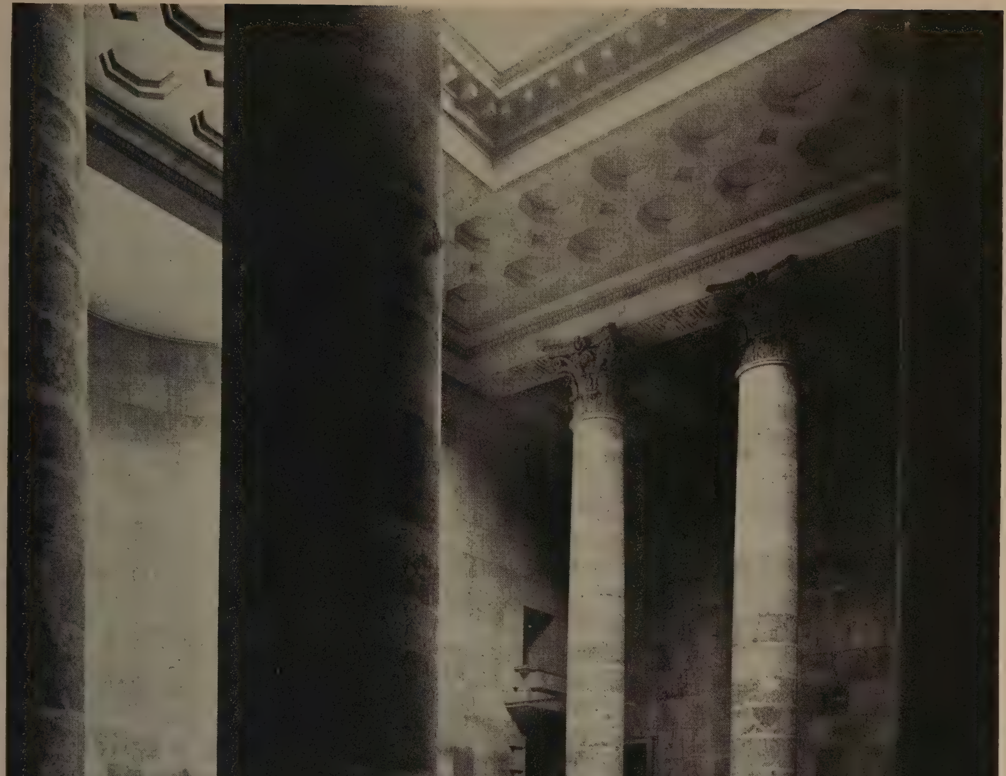
Colonnade in Open Square Court

NEW POLICE HEADQUARTERS IN COPENHAGEN, DENMARK

H. Kampmann, Architect



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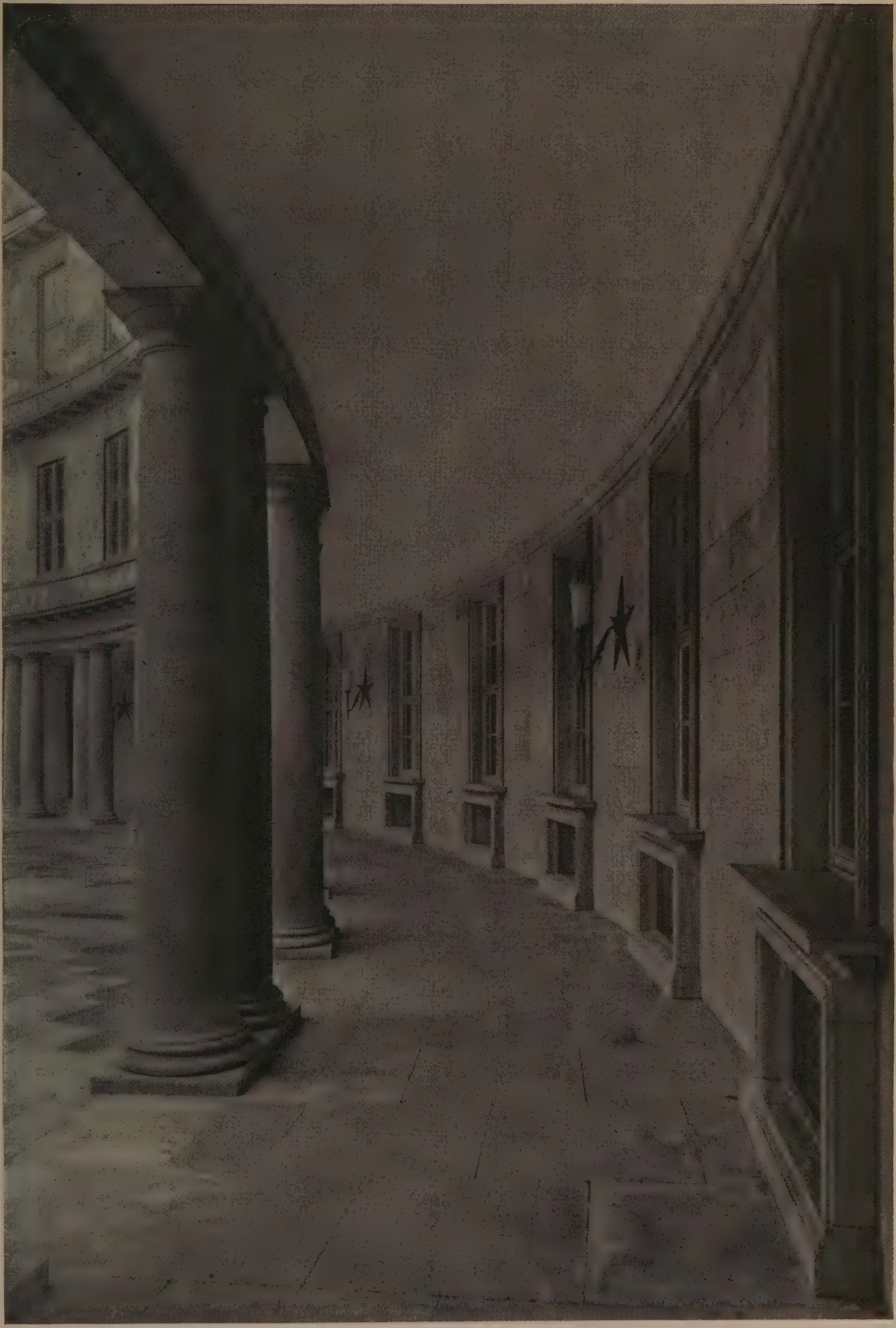
Open Square Court

NEW POLICE HEADQUARTERS IN COPENHAGEN, DENMARK
H. Kampmann, Architect



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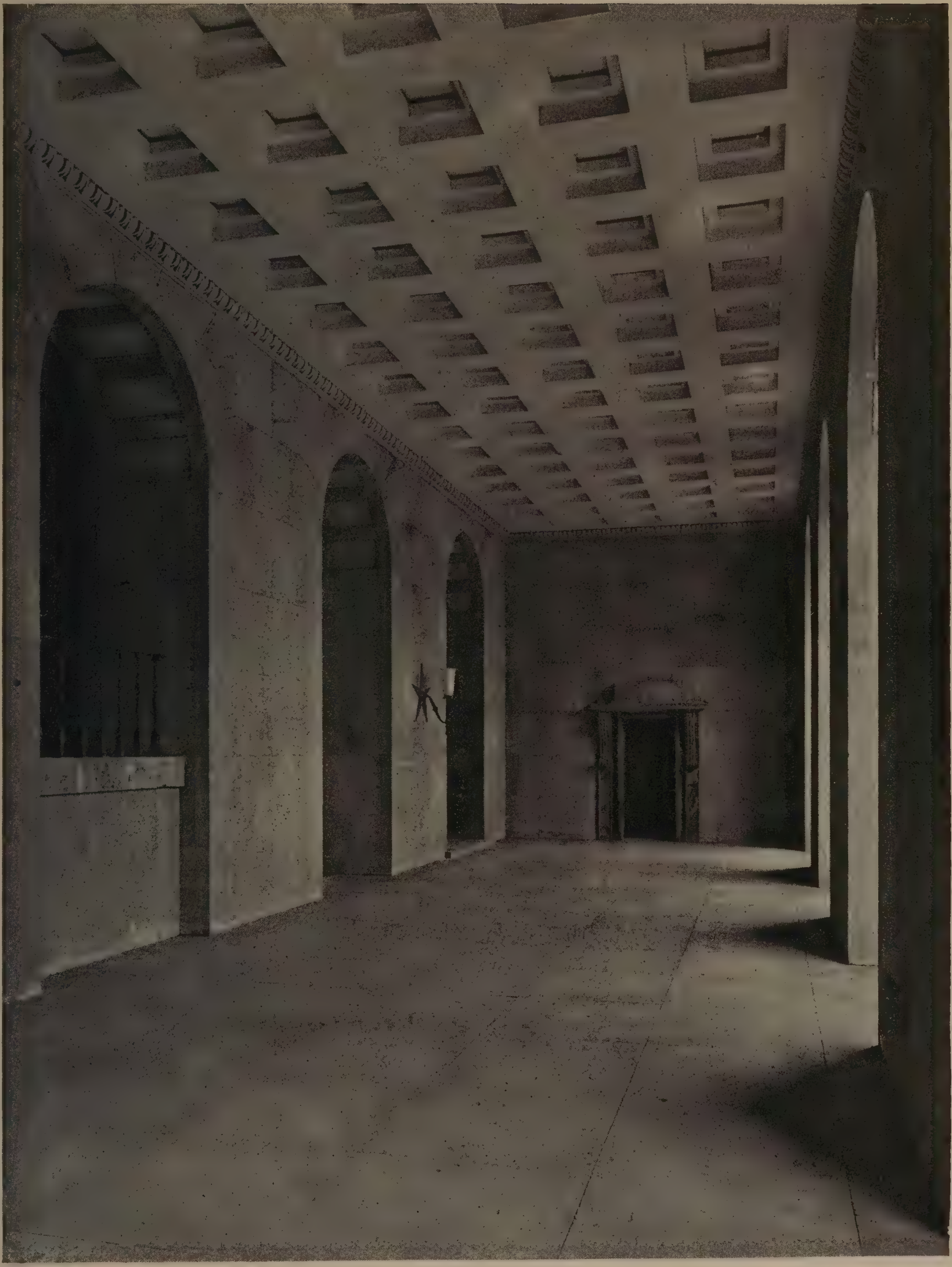
Colonnade in Open Circular Court

NEW POLICE HEADQUARTERS IN COPENHAGEN, DENMARK

H. Kampmann, Architect



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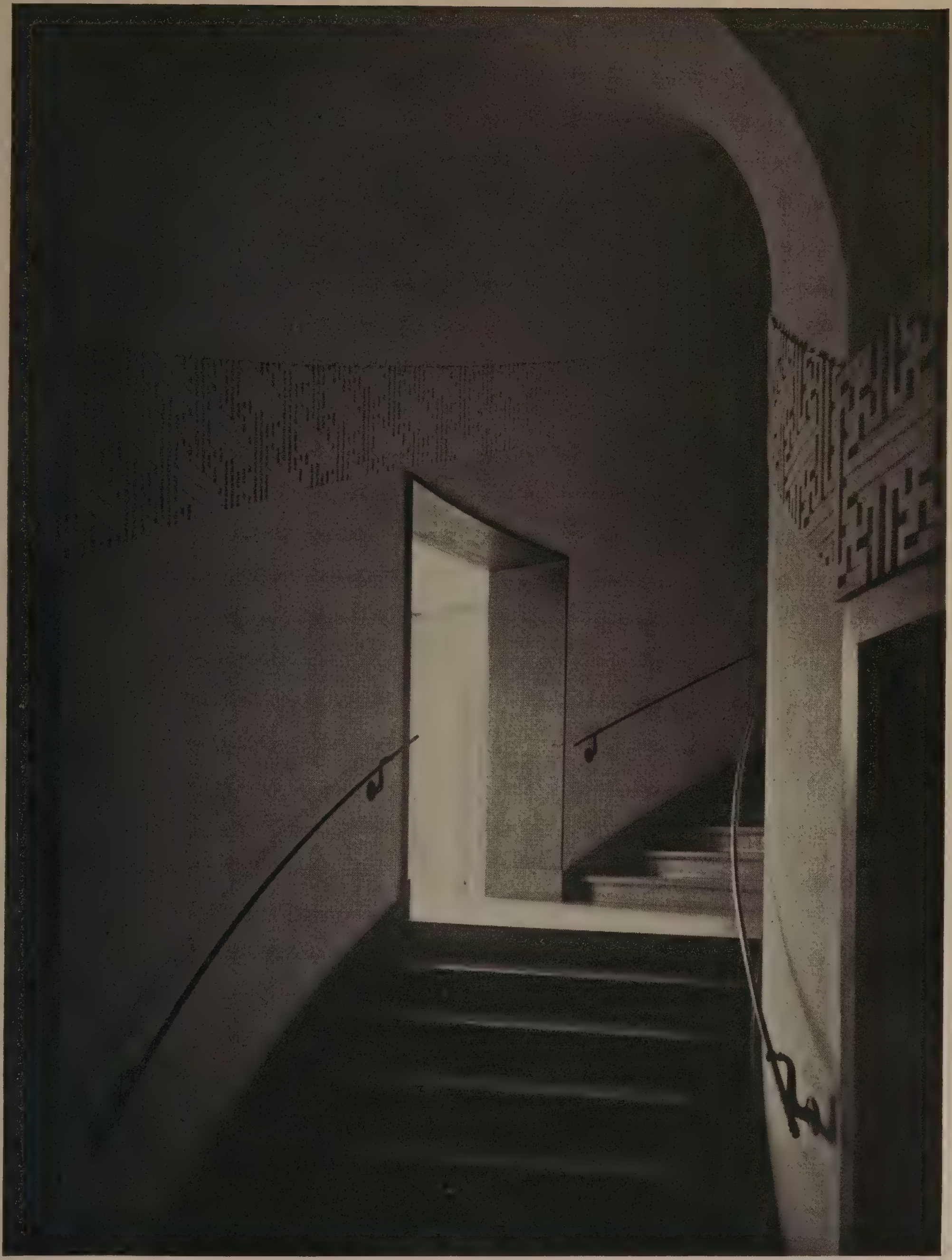
Main Entrance Colonnade

NEW POLICE HEADQUARTERS IN COPENHAGEN, DENMARK
H. Kampmann, Architect



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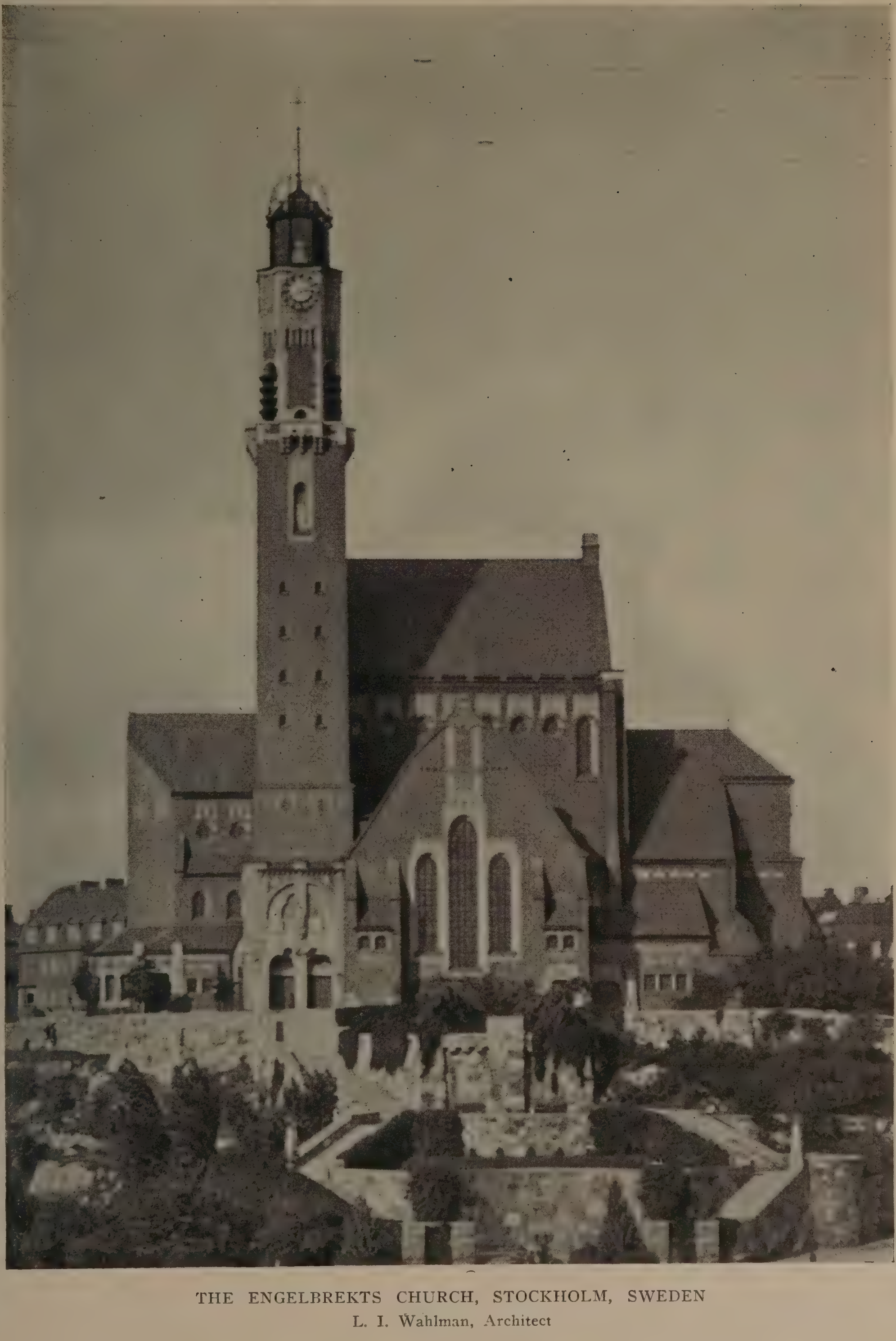
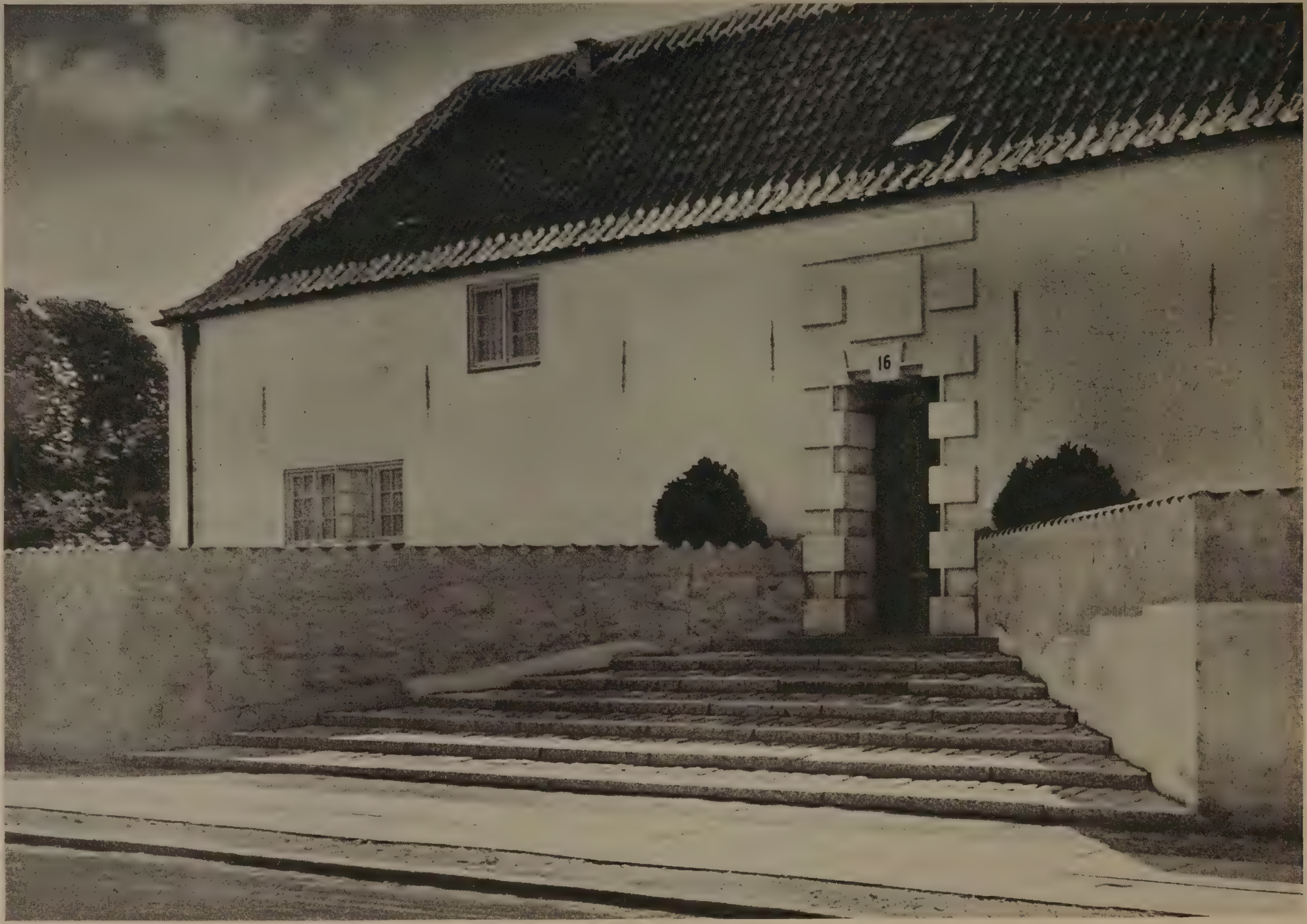
Stair in Corridor

NEW POLICE HEADQUARTERS IN COPENHAGEN, DENMARK

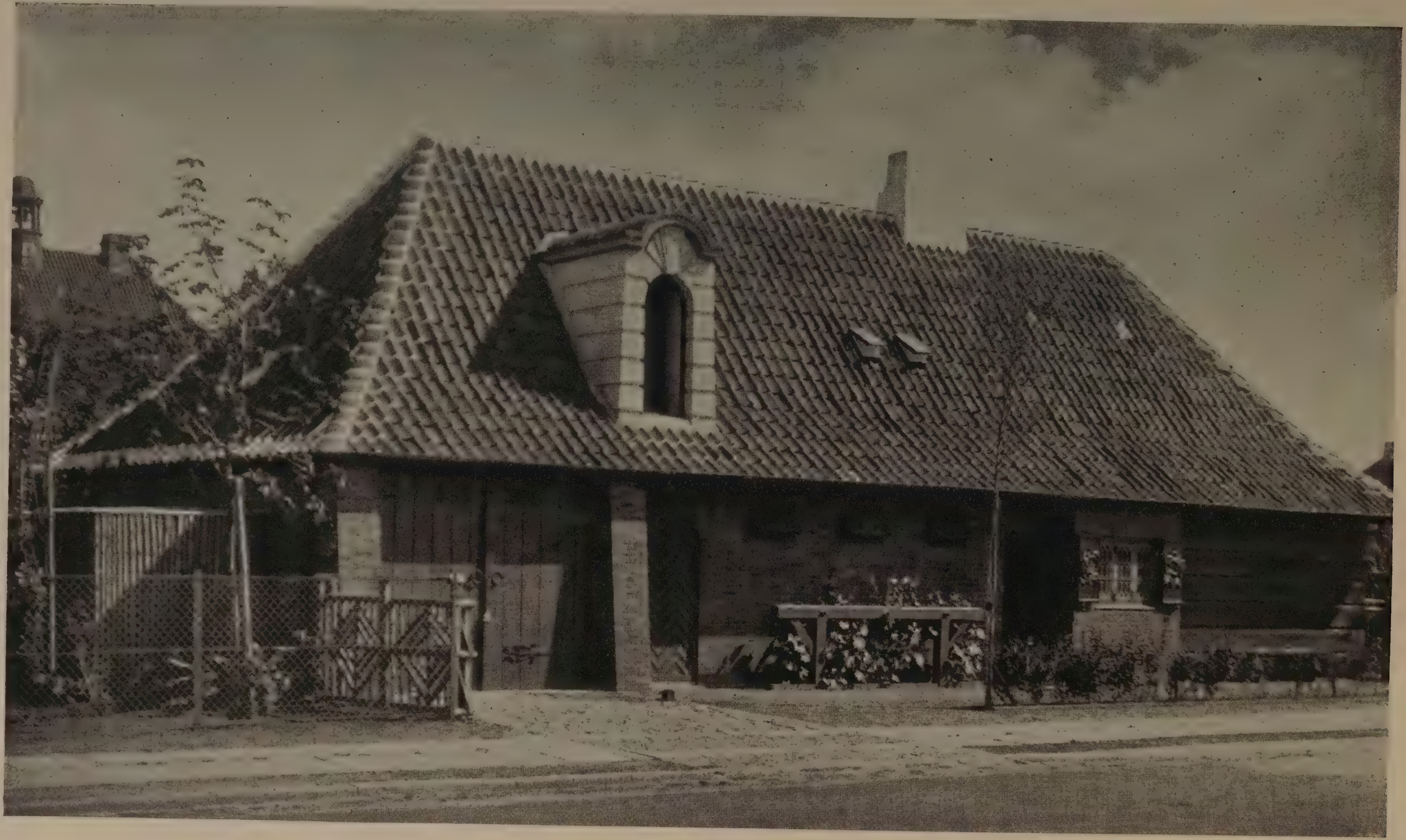
H. Kampmann, Architect



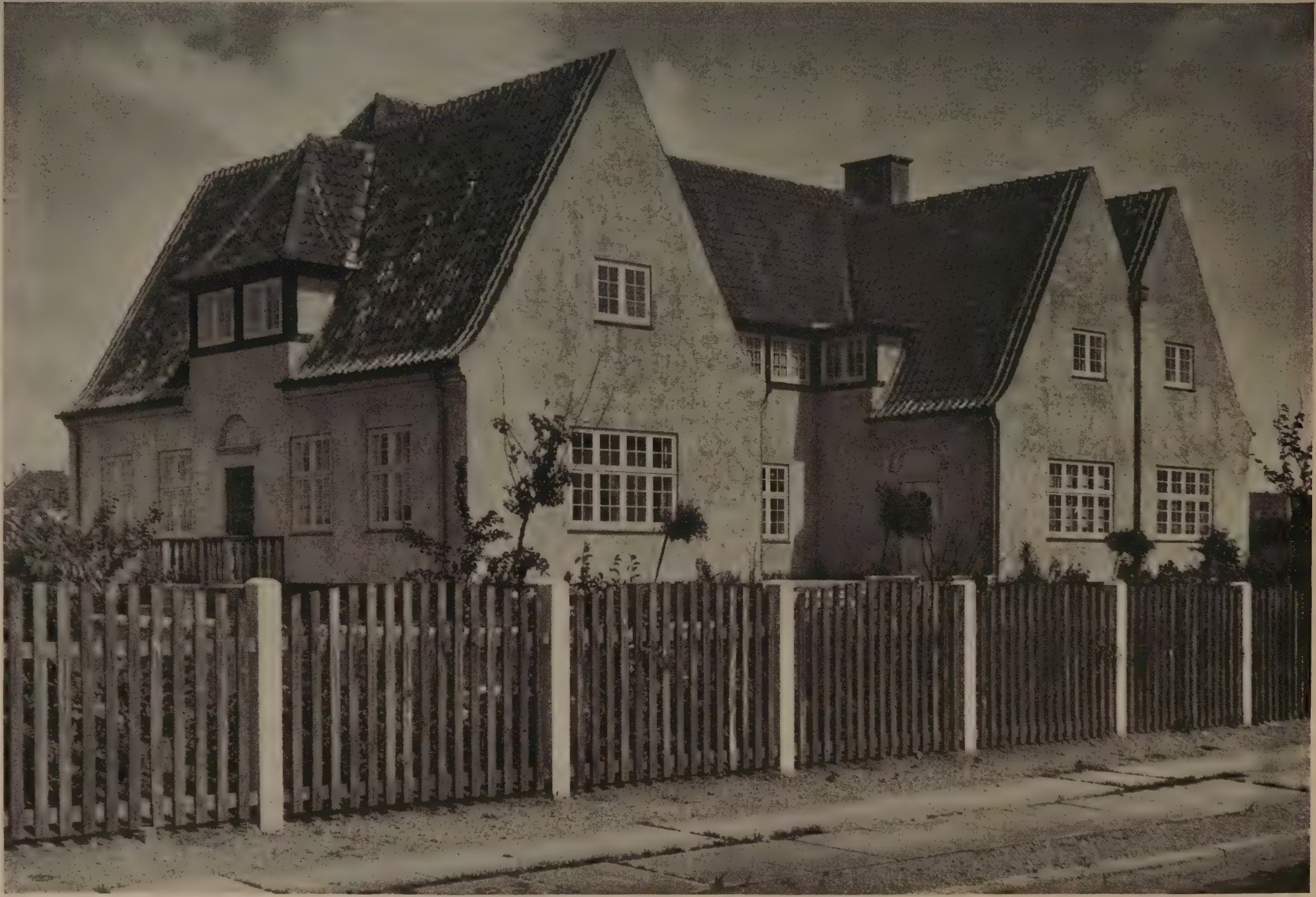
THE ENGELBREKTS CHURCH, STOCKHOLM, SWEDEN
L. I. Wahlman, Architect



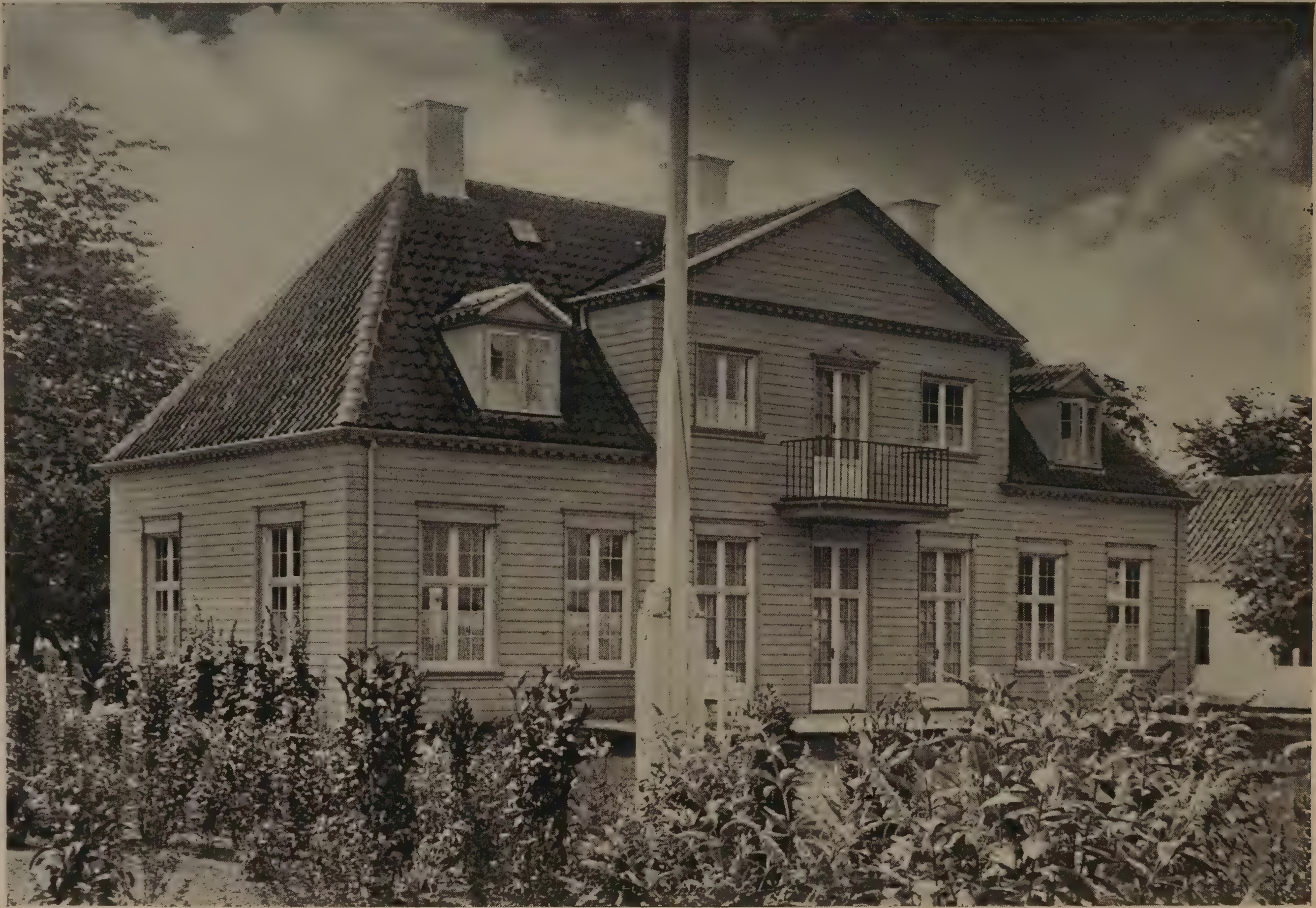
A RESIDENCE IN COPENHAGEN, DENMARK
Poul Baumann, Architect



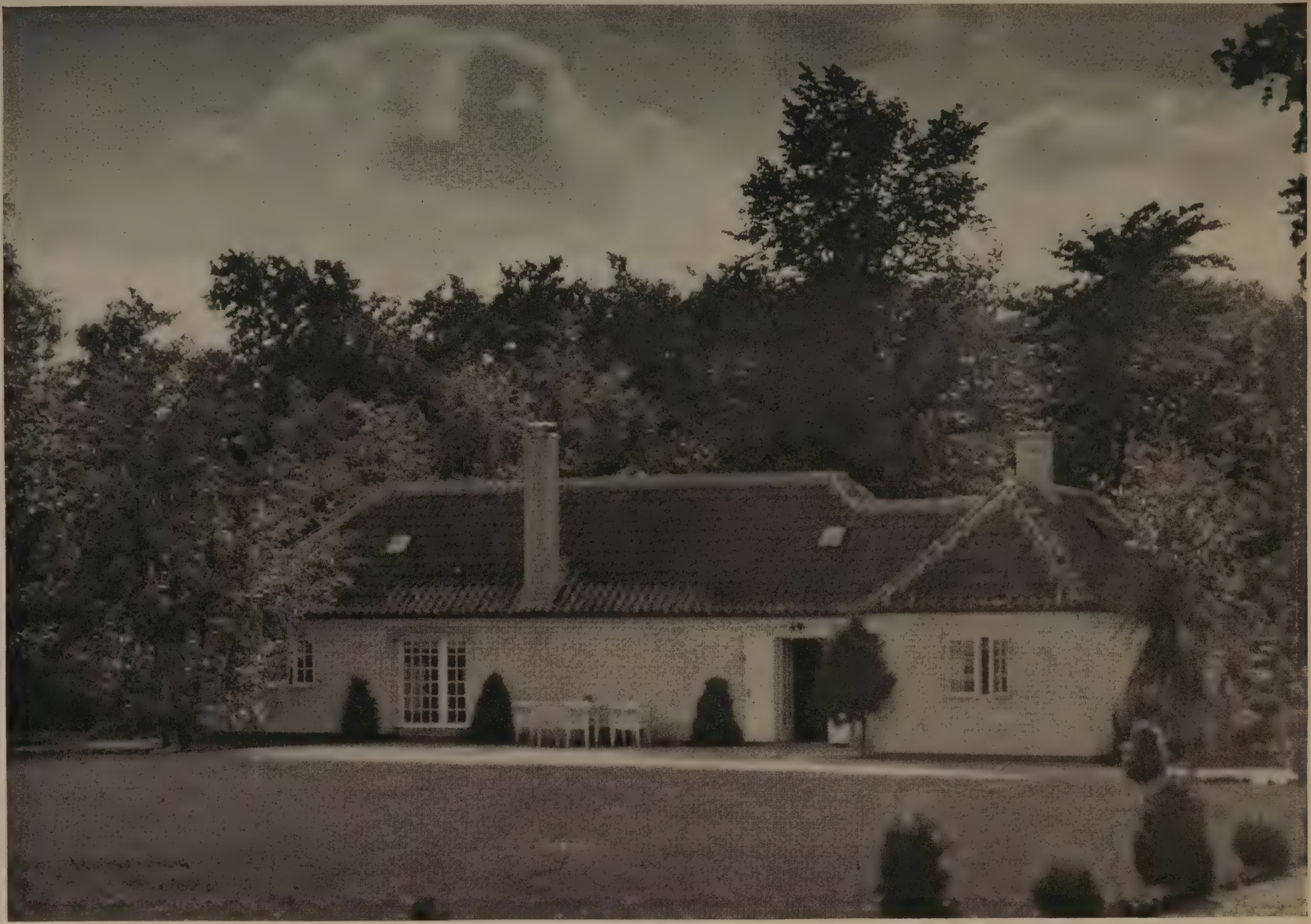
STABLE AND GARAGE FOR PRIVATE RESIDENCE, COPENHAGEN, DENMARK
Helweg-Möller, Architect



A RESIDENCE IN COPENHAGEN, DENMARK
Mogens Clemmensen, Architect



A RESIDENCE IN COPENHAGEN, DENMARK
Albert Oppenheim, Architect



A RESIDENCE IN COPENHAGEN, DENMARK
Rosenkijer & Hjejle, Architects

EUROPEAN STORE FRONTS *and* WINDOW DRESSING

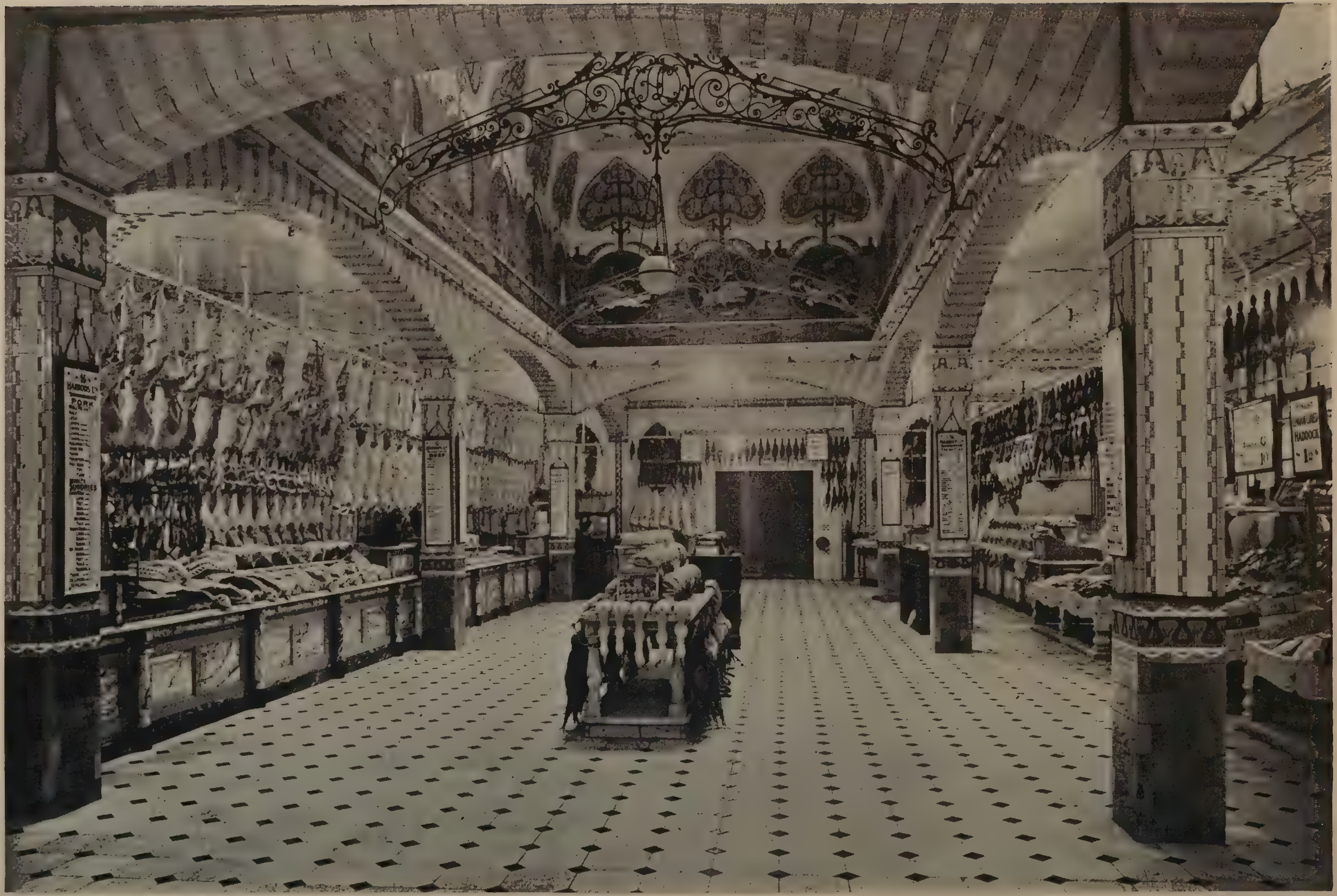
By Clinton H. Blake, Jr.

When I was asked by The Architectural Record to make a survey last summer of store-fronts and window-dressing abroad, I had no idea whether the result of such an investigation would be favorable or unfavorable to the American architects and merchants. My impression was that it would be favorable to our architects and that the laurels for artistic window-dressing and displays would probably belong to the shop-keepers abroad. My feeling with respect to the shop-fronts themselves has on the whole been somewhat confirmed. There are so many elements involved, however, that it is difficult, with fairness, to make any sweeping general conclusions. Each country has its special merits and demerits. The greatest advantage can be derived, I think, by a consideration of the points of excellence in each country and of the points of deficiency as well.

The art of window-dressing has developed at an amazing rate in recent years. Development of the modern store-front to meet the demands of today—both materially and artistically—has been equally rapid. The shops of each country have their own peculiar characteristics and appeal. Those of England differ materially from those of France and Italy. Those of France are unlike those of Italy and of England. Those of the United States differ in general character and effect from those of any other country. One can not say that the store-fronts and window-dressing of any one of these countries excel in all particulars. The best that we can do is to strike a general balance.

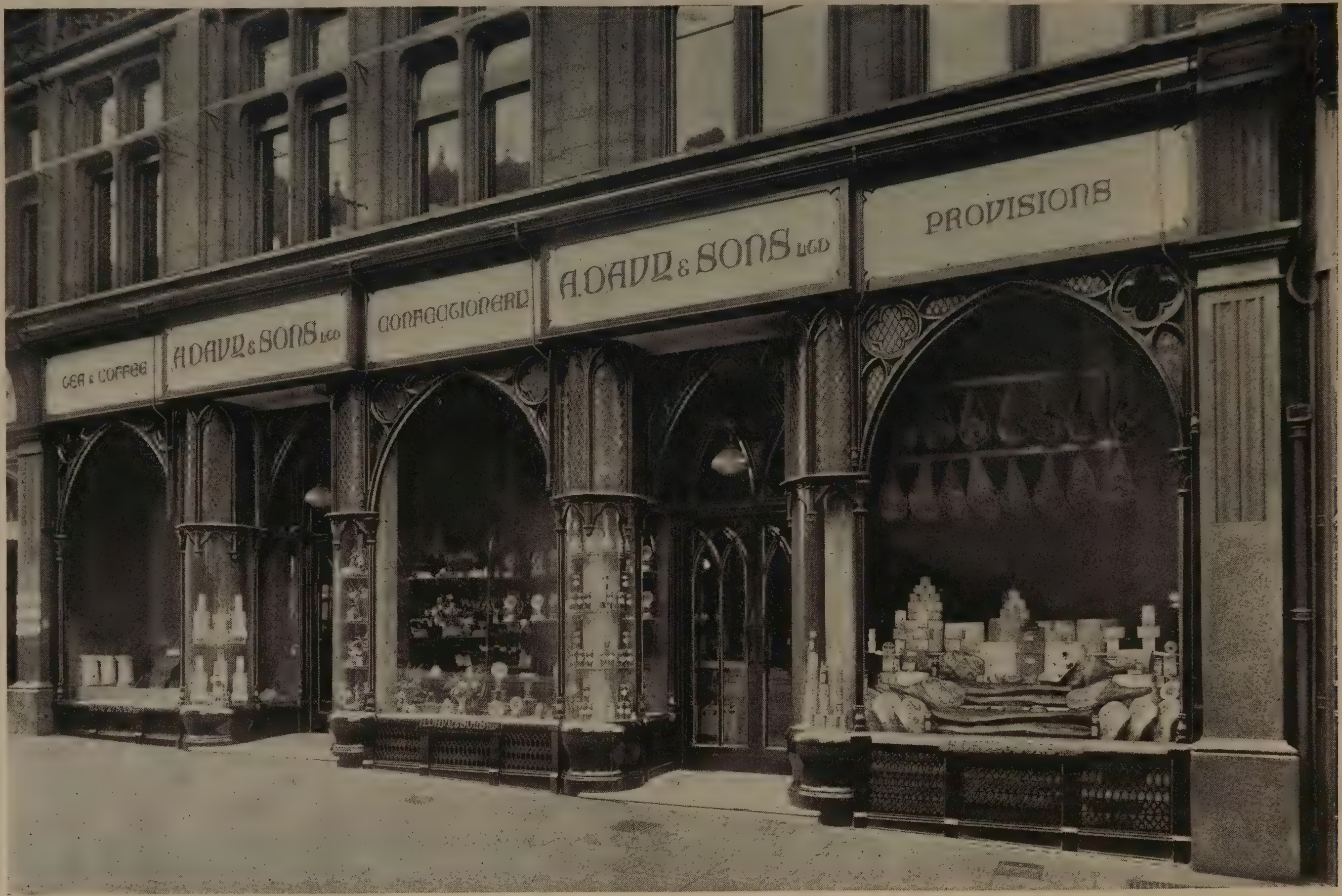
It is not to be wondered at that the English shops are more nearly similar to those we know in this country than are the shops of France or of Italy. The community of race and customs between America and England is necessarily expressed somewhat in their business structures and policies. The habits and preferences of any people are in general reflected in the appearance and conduct of the trade establishments which cater to them. In fact, a very interesting paper might be written indicating how directly the shops of various countries reflect the characteristics of the various peoples who patronize them. Despite the fact, however, that the English and Americans are so closely allied in many fundamentals, the shops of England differ radically in many respects, both in appearance, in design and in conduct from the shops in this country. In America emphasis will be laid on certain types of stores and on the development of improvements in store construction along certain lines which appeal to the American merchant as advisable and worth while. In another country, the emphasis will be along entirely different lines.

Probably the most interesting development in store-front design and store construction and window-dressing in England has been in a field which is quite unique and which has not yet been developed to any extent by our American designers and merchants. Within the last few years, there has been a widespread demand in England for better sanitary conditions and construction in the shops dealing in meats and foodstuffs. This has resulted in a truly remarkable change in these establishments. They have been modernized and entirely reconstructed along new and essentially up-to-date lines. The new construction has not been confined by any means to work in sanitation, but has extended to the develop-



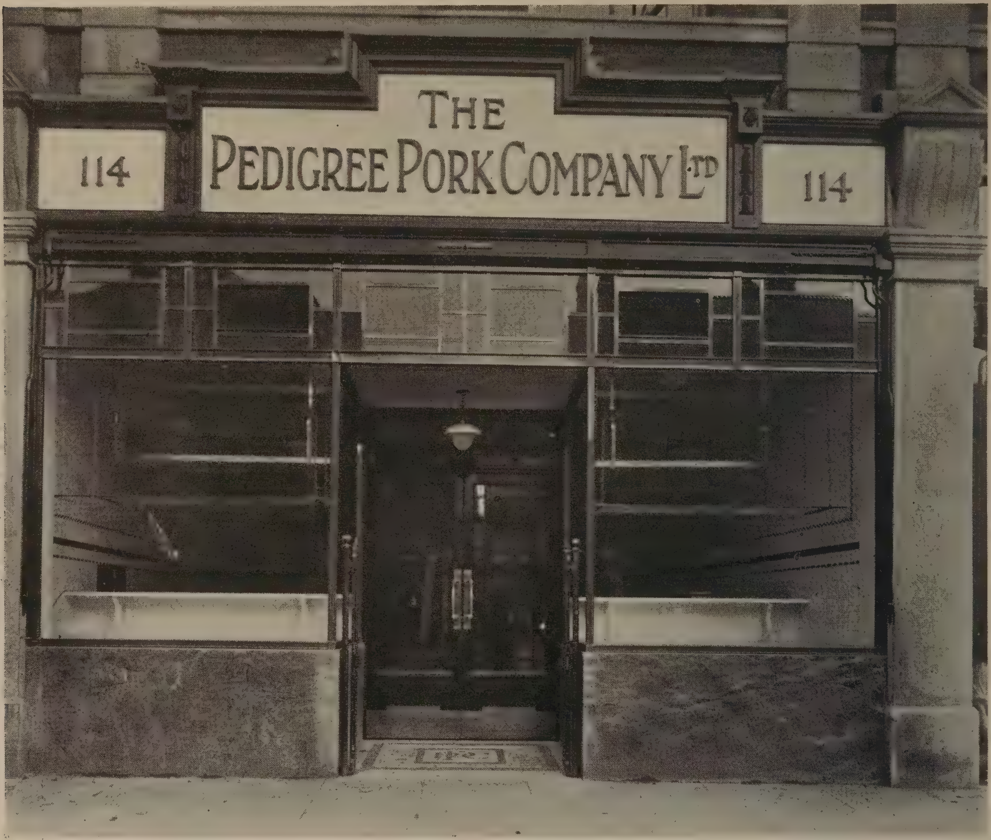
The Architectural Record *August, 1926*

MEAT HALL AT MESSRS. HARRODS, LTD., BROMPTON ROAD, LONDON, S.W.



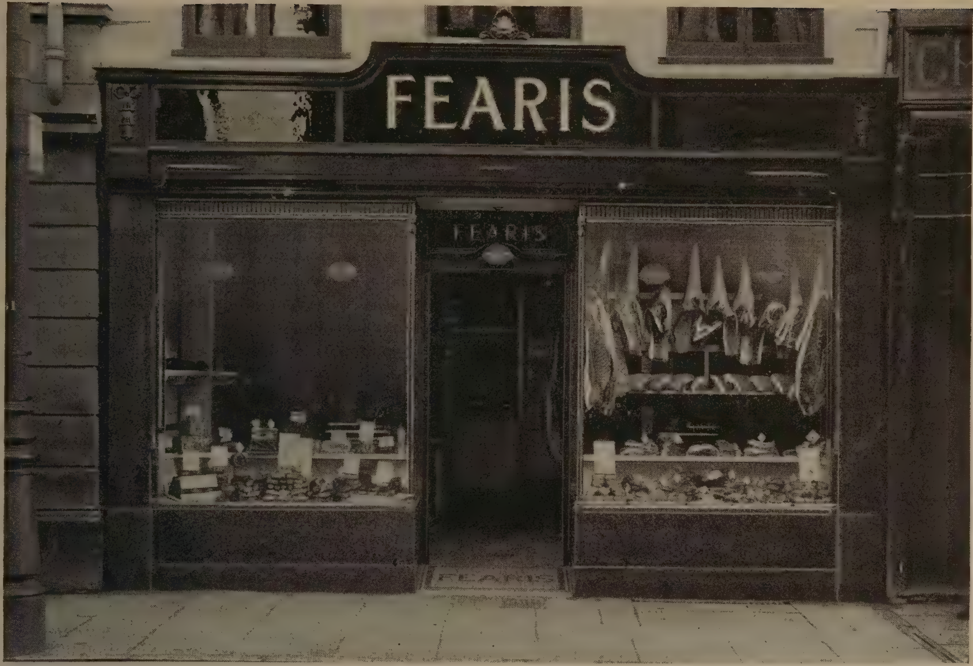
SHOP FRONT OF MESSRS. A. DAVY & SONS, LTD., SHEFFIELD, ENGLAND ment of new fronts and to additional care and study in the matters of window displays and window-dressing. Some of the most interesting work abroad, both along this line and in the treatment of store-fronts and window-dressing in general, has been carried out by the well-known organization of Frederick Sage & Co., Limited, of London. Much of this has been designed, as well as executed by this firm, to the courtesy of which I am indebted for most of the photographs which illustrate these articles. Working both independently and in connection with various architects, Messrs. Sage & Company have been responsible for work which is characterized at once by good taste and by a realization of the practical requirements of the various trades and localities involved.

The ordinary butcher, delicatessen store proprietor and provision dealer in America has been content hitherto if his premises have appeared reasonably clean and adapted to the needs of his business. In the better shops, attention has unquestionably been directed and given to sanitary improvements and appliances. The dealer in food commodities has not, however, given attention to these details to any such extent as that which has been of recent years and is being increasingly given to them by the corresponding dealer in England. Here the store-front and

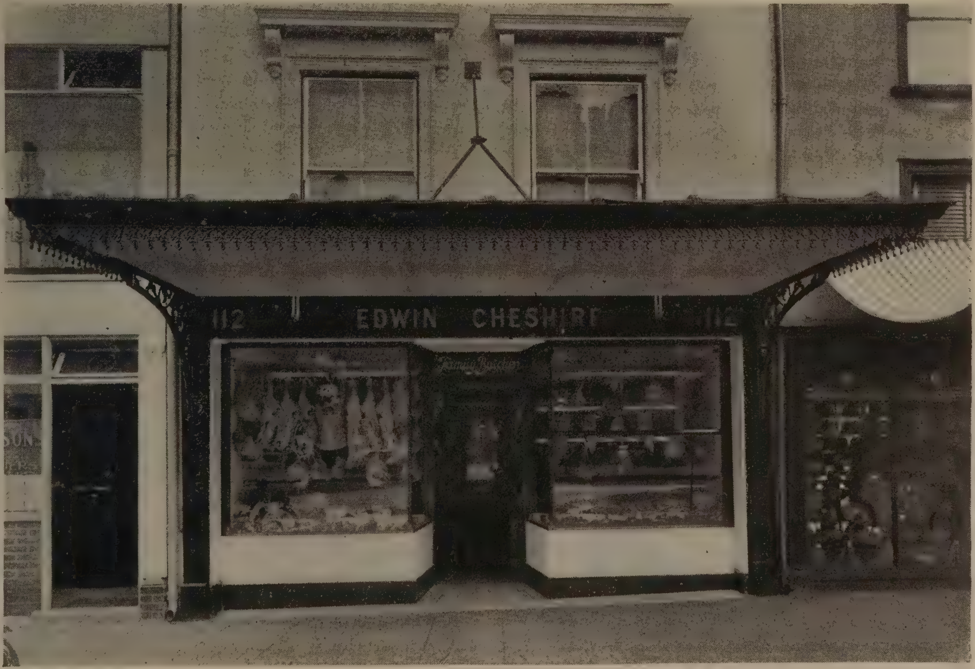


A SHOP FRONT IN KING STREET, HAMMERSMITH, LONDON, W. C.

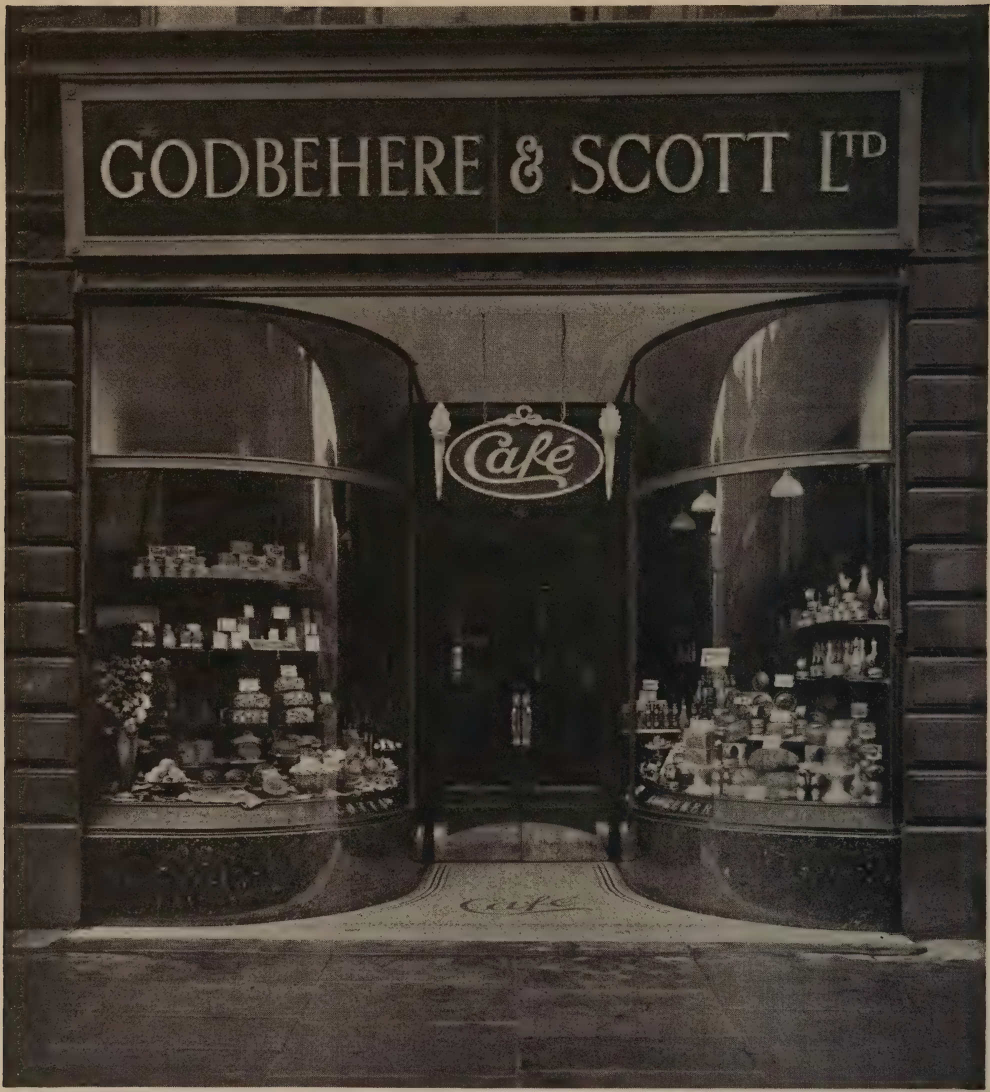
Bronze metal is used for the sash bars, transome rail and astragal bars. The fascia is constructed in white vitrolite with bronze letters and numerals. The lobby floor, stall risers, window bottoms and shelving are of marble



A SHOP FRONT IN KINGS BARTON STREET, GLOUCESTER, ENGLAND



A PICTURESQUE SHOP FRONT IN COLCHESTER, ENGLAND, WITH PERMANENT AWNING



A SMALL CONFECTIONERY SHOP FRONT IN MANCHESTER

Bronze metal and emerald pearl stall risers are used, and the fascia is carried out in black vitrolite framed in bronze metal with oxidized silver letters

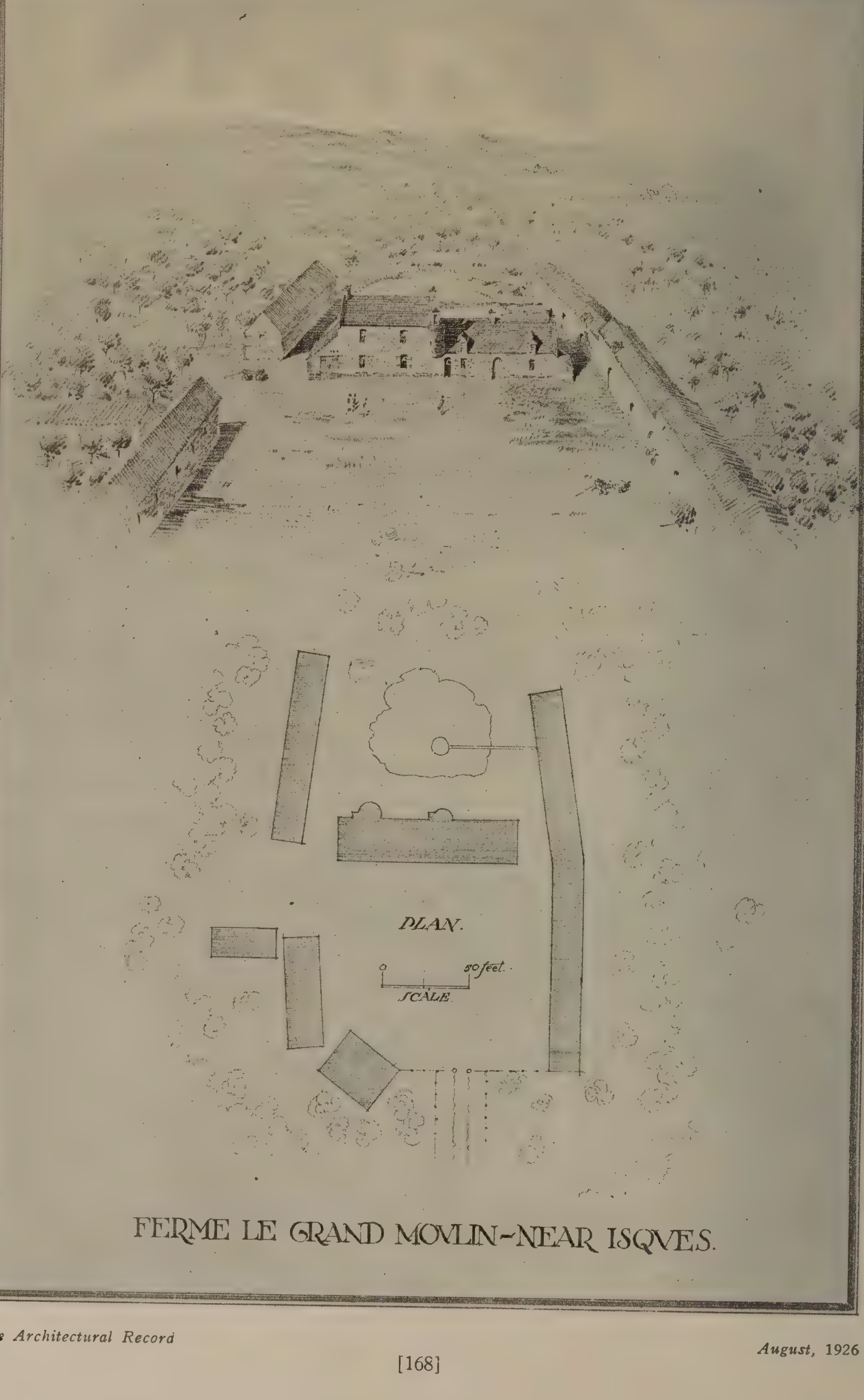
window displays have been treated quite frequently as of secondary and of little importance. Any housewife or observant person will recognize the truth of the statement that the store-front of the ordinay butcher shop, for example, in America, is anything but handsome or attractive. In England, these shops are now being constructed on a scale which, in view of the character of the goods dealt in, may be considered nothing less than luxurious. The English architect and builder are, as a matter of fact, according to these shops at the present time in their work the same degree of importance which they accord to the ordinary shop which deals in fashionable merchandise and accessories. In redesigning and rebuilding them, they are freely employing marble and bronze work within and without and many of the refinements of construction and of design which one expects to find ordinarily only in Regent or Bond Street shops.

Imagine what the feelings would be of the ordinary New York butcher, were he to find himself housed in an establishment with marble trimmings without and within, marble shelves, floor and stall-risers, ecclesiastical or other period exterior treatment, a permanent awning of careful workmanship and design and similar architectural and sanitary embellishments! Yet this is exactly the type of butcher shop which is now being developed and erected throughout England. Marble and granite are employed freely within and without; carefully designed and executed bronze and metal work is the rule in these new establishments. Oxidized silver lettering and such details are characteristic of the work of construction.

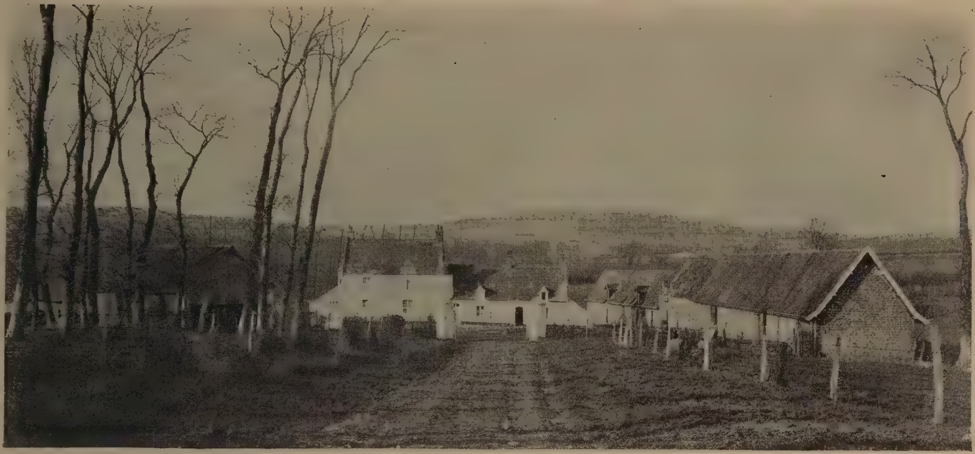
The development of these English shops is not confined by any means to matters of appearance or the more apparent details of design. The improvement of sanitary conditions, which, as I have noted, gave rise to the developments in this special field, has been constantly kept in mind and received special attention at the hands of the designer and builder, whether it be in the matter of refrigeration, ventilation or other details of sanitation. The storefronts, as a rule, are of the "enclosed type," embracing the full frontage. Special attention is given to the display shelves and window display space. The most up-to-date methods of refrigeration are applied and special attention is given likewise to the matter of ventilation. As to the latter, one of the systems now employed is to provide ventilation through a fanlight or other appropriate opening to a fan duct at a distance well beyond the window. In this way, the ventilation is secured and at the same time the settling of any dust on the window displays and shelves is obviated. Special attention is given, also, to the matter of light, in order that as much daylight may be available as possible, both in the interest of the general appearance of the premises and in that of sanitation.

The exterior of these shops has received the same painstaking attention. Any one of a number of those recently designed and executed might be given over to the sale of the finest grade of merchandise, without there being the slightest incongruity in the result. So far as the character and richness of the interior and exterior design and finish are concerned, the shops could display high grade silks or other quality goods quite as effectively as they now display the choicer cuts of meats or delicatessen specialties. The architects and merchants of America may well give attention to this interesting development in European construction and look to their laurels in this field. It is curious that America, which, probably more than any other country, has given attention to sanitary requirements of all kinds, should be forced to acknowledge that its accomplishments with respect to the development of the shops in which food stuffs are sold is inferior to the results secured in the same field abroad.

A glance at the accompanying photograph of the interior of the butcher department of Harrods, Limited, in London, will give some idea of the attention which the English merchants and architects are giving to this work. Here is a field to which attention on the part of the American designer may be profitably directed. There is no reason that the American merchant who deals in meats and food supplies should not be quick to sense the advantages which flow from the proper design and equipment of his establishment along modern lines. That he will do so promptly, if the matter is brought to his attention, there can be little reason to doubt.



FERME LE GRAND MOVLIN-NEAR ISQVES.



The FARMSTEADS and SMALL MANORS OF FRANCE

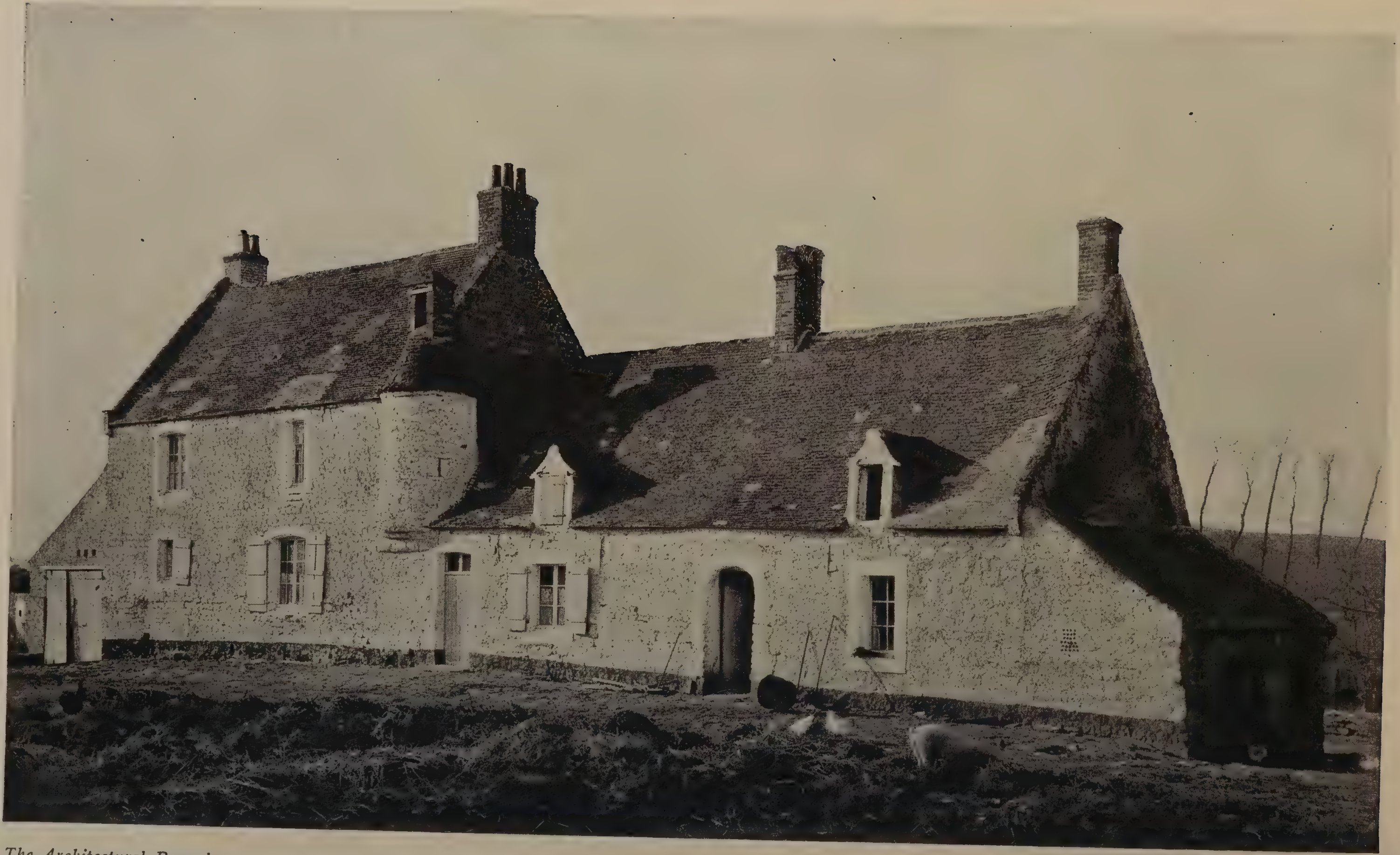
By

Harold Donaldson Eberlein, Roger Wearne Ramsdell
and Leigh Hill French, Jr

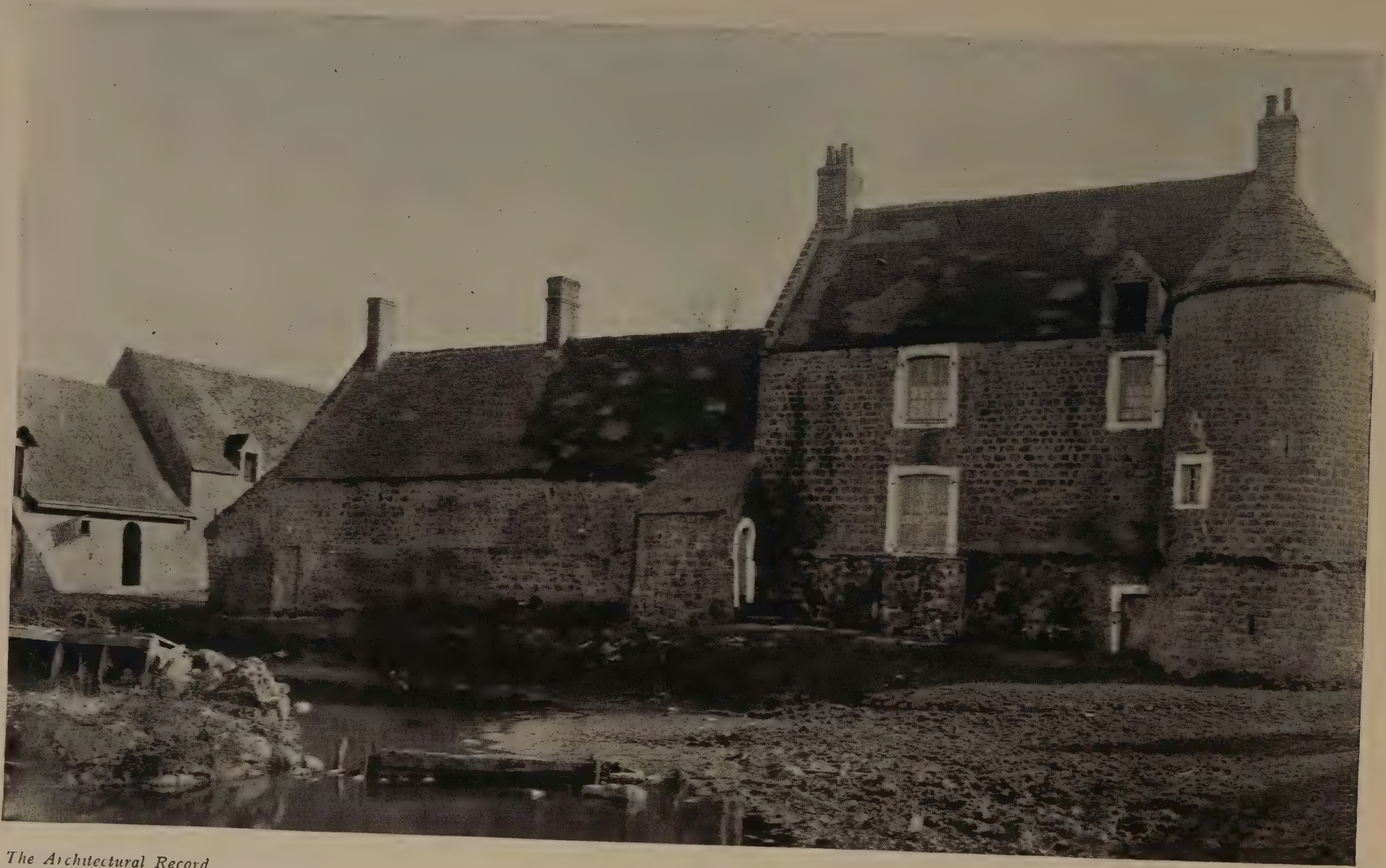
IX. FERME LE GRAND MOULIN, NEAR ISQUES. FRANCE

Scarcely more than a stone's throw from La Cugnie is Le Grand Moulin, an ancient farmstead many of whose buildings are now ruinous or have even disappeared down to the very foundations. It was evidently once a far larger and more important establishment than it now is. Instead of the master's house forming one side of the great fortified barnyard, as it does in so many instances of a similar sort, it seems to have stood about in the centre of the open space. From the front, to the southward, the road stretched uphill; to the back, at the north, was the farmyard pool or pond, now partially filled up and neglected. To the west of the pond was a group of substantial buildings, now so nearly destroyed, however, that it is impossible to ascertain their character with any degree of certainty. So far as can now be determined, a marsh and the stream to the north formed a natural barrier and apparently there never existed any building on that side to complete the enclosure.

By way of contrast to La Cugnie, which was published in the June, 1926, issue of The Architectural Record, it would be difficult to discover anything in the same general class more different than Le Grand Moulin, and yet both are informed with the same strong simplicity and the same directness in the expression of a common purpose. While the dwelling at La Cugnie more or less rambles, at Le Grand Moulin it is virtually a single oblong rectangle on plan, with a high part and a low part as variations of composition. Save for the difference in height between the two sections, the only significant departure from strict rectangular regularity is to be found in the projections formed by the *clocheton* or corbelled bell-turret of the south front and the circular tower at the northeast angle.



South Front
FERME LE GRAND MOULIN, NEAR ISQUES, FRANCE

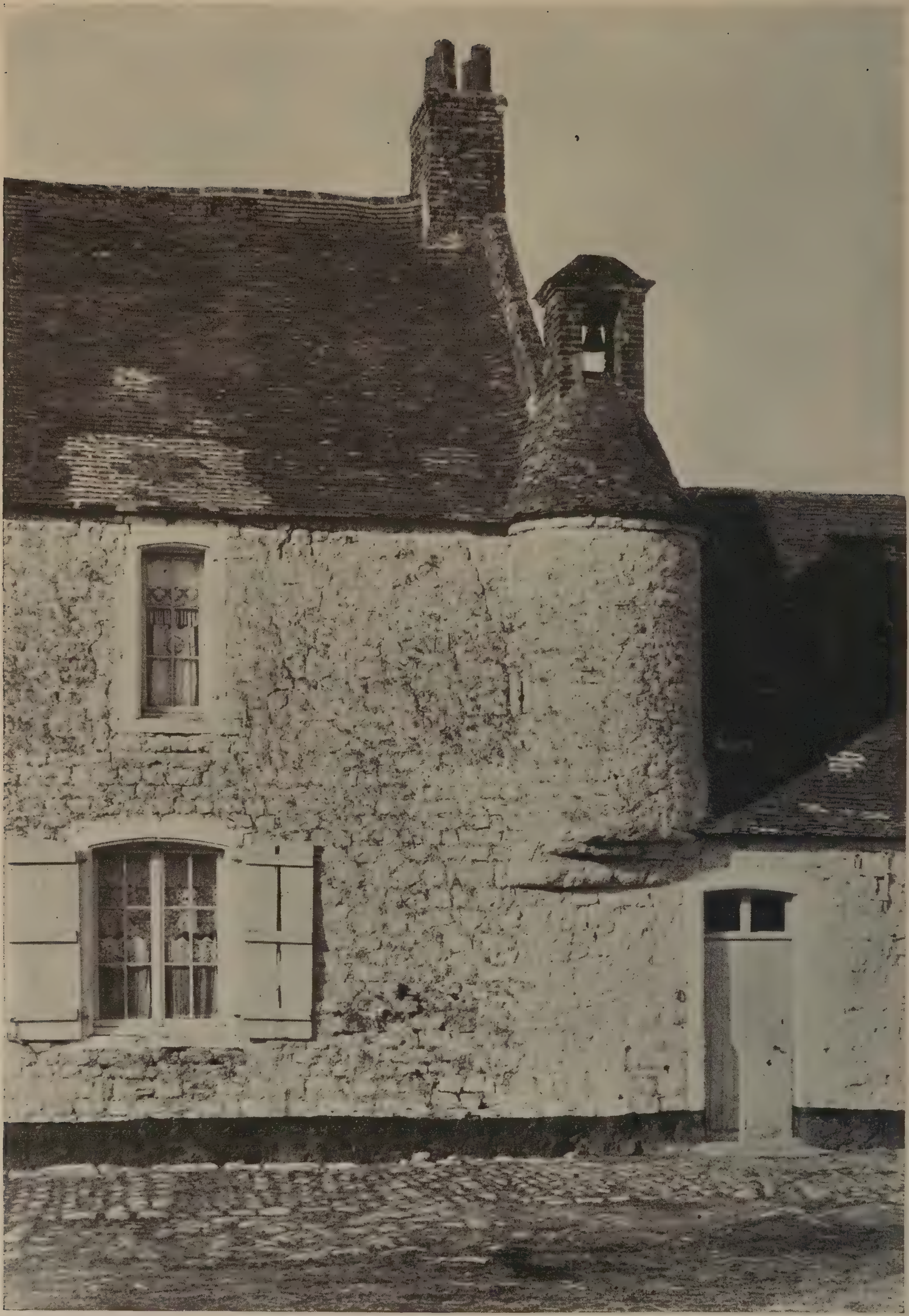


The Architectural Record

August, 1926

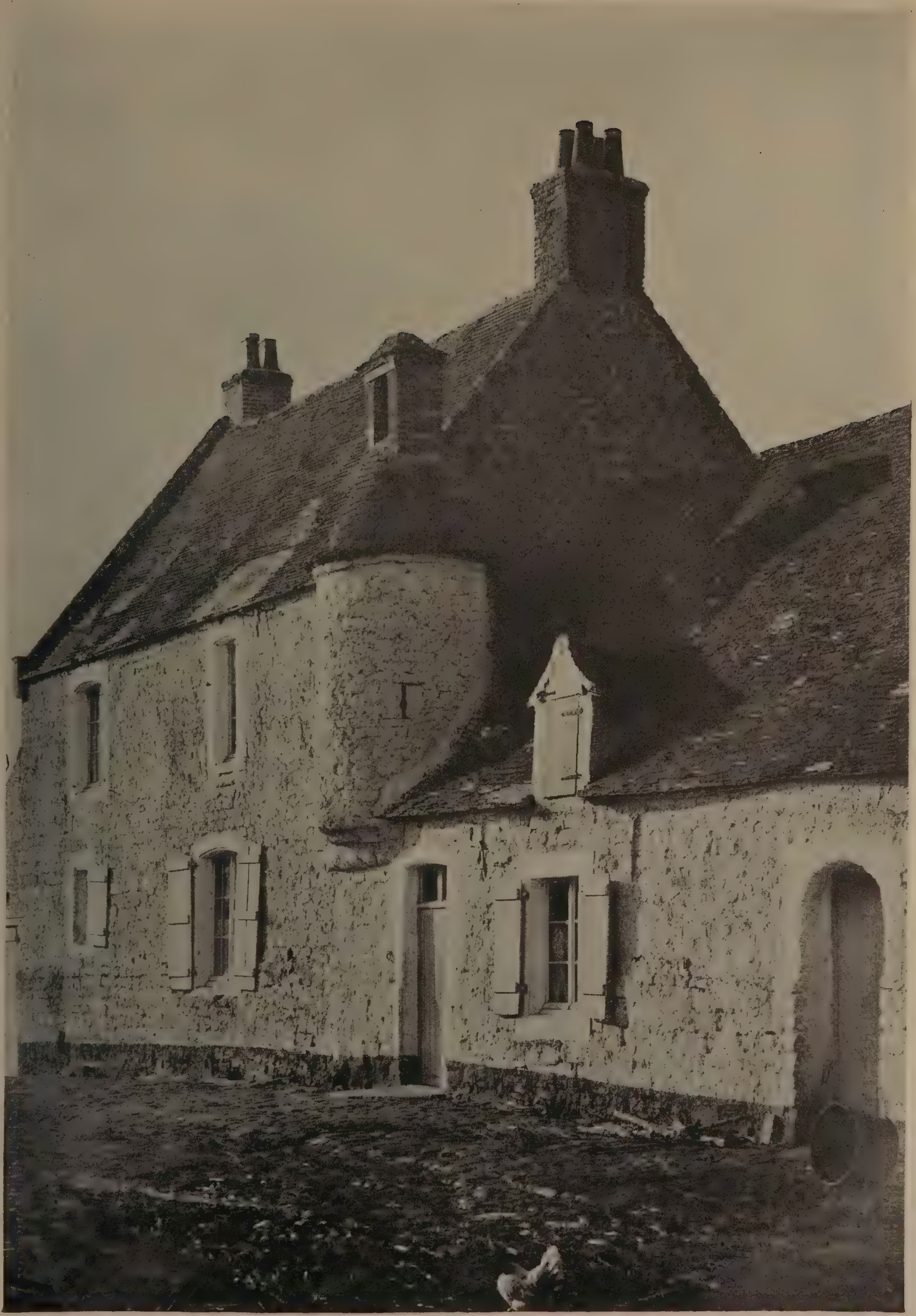
North Front

FERME LE GRAND MOULIN, NEAR ISQUES, FRANCE



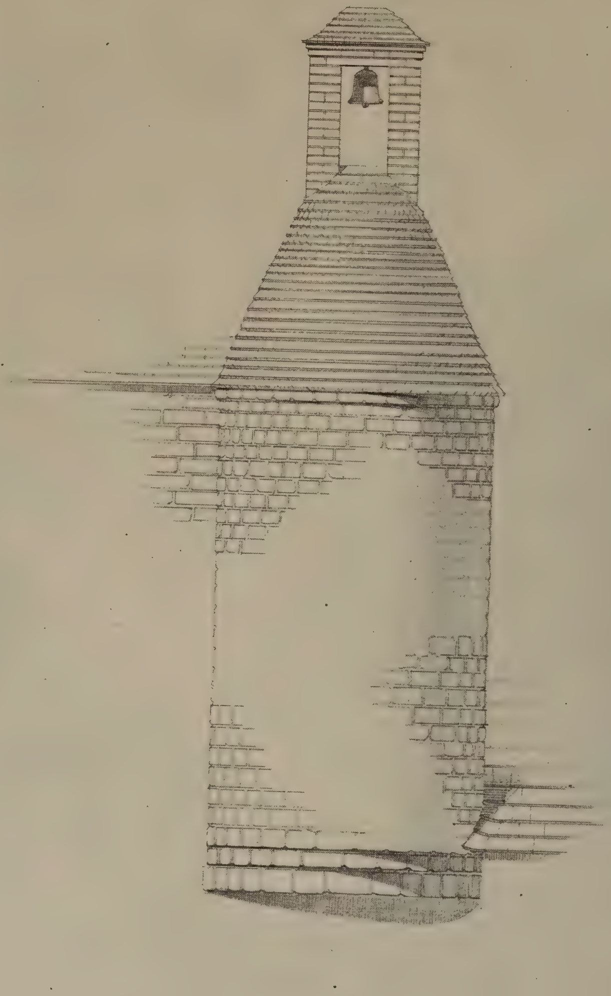
Detail, South Front

FERME LE GRAND MOULIN, NEAR ISQUES, FRANCE



Bell Turret

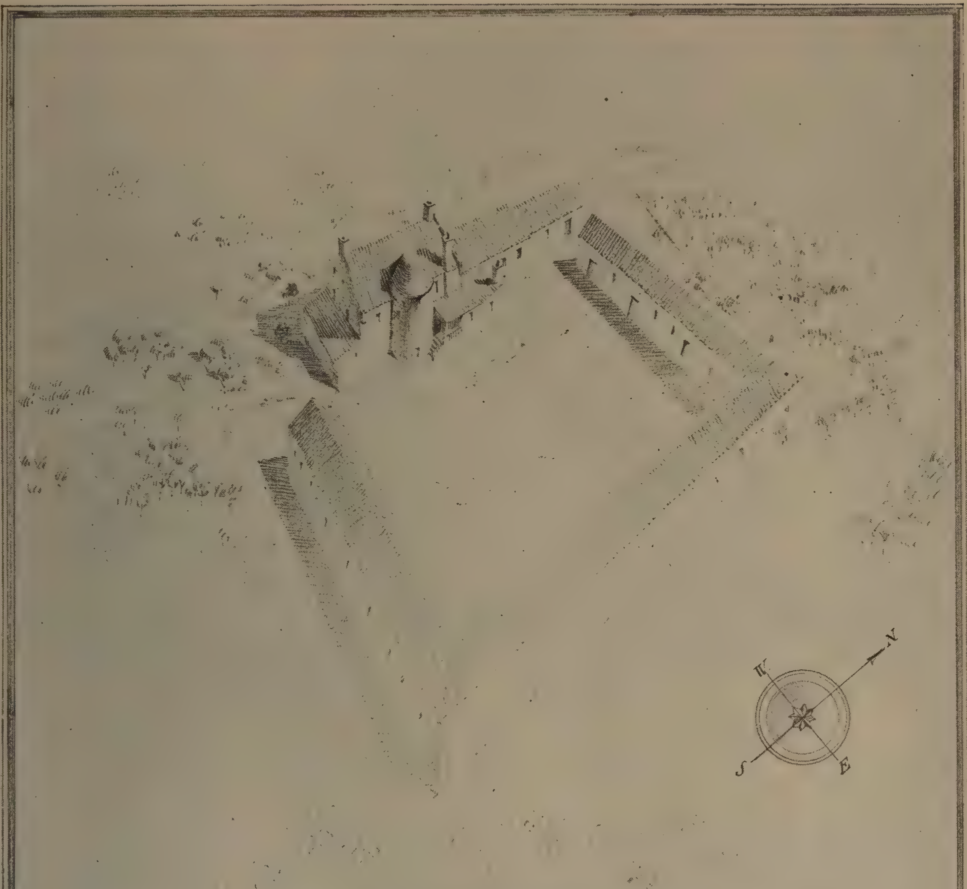
FERME LE GRAND MOULIN, NEAR ISQUES, FRANCE



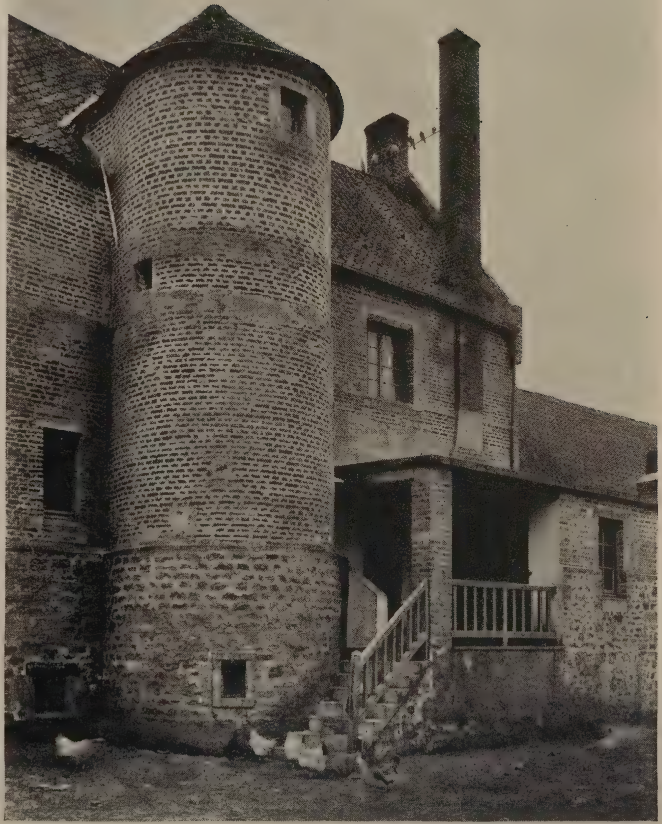
Bell Turret.

2 ft.
SCALE

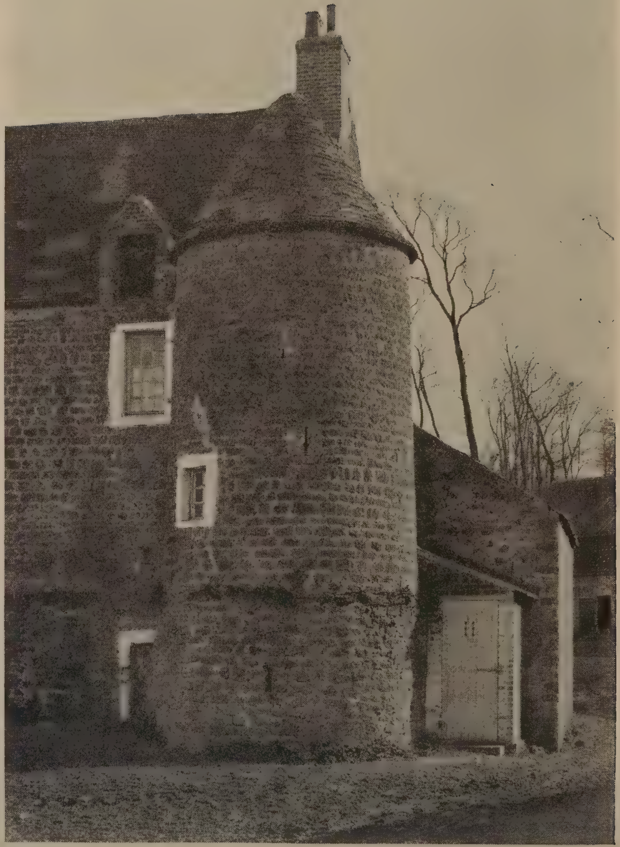
Ferme le Grand Moulin – near Isques.



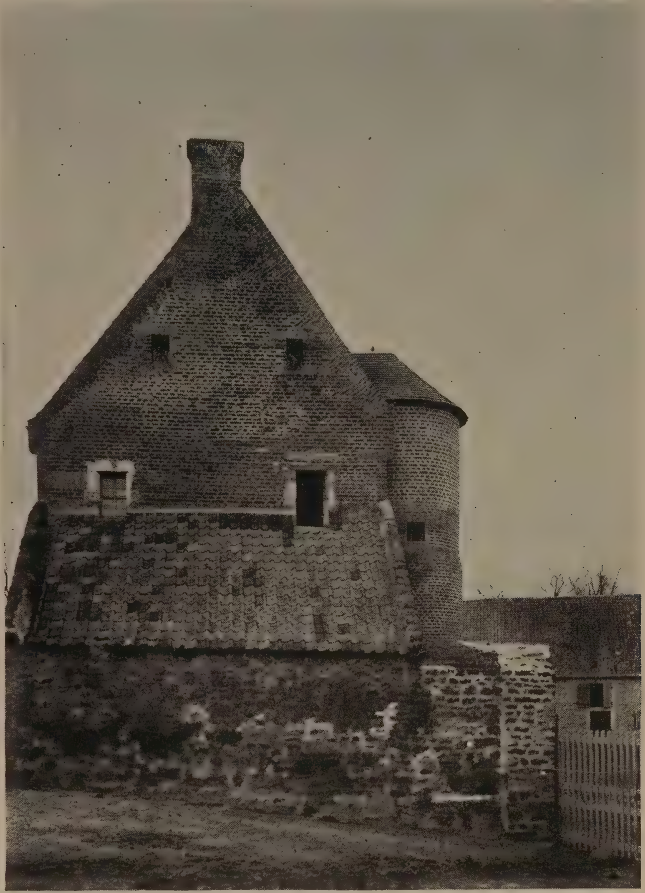
FERME LA GRANDE MAISON-BAZINGHEN

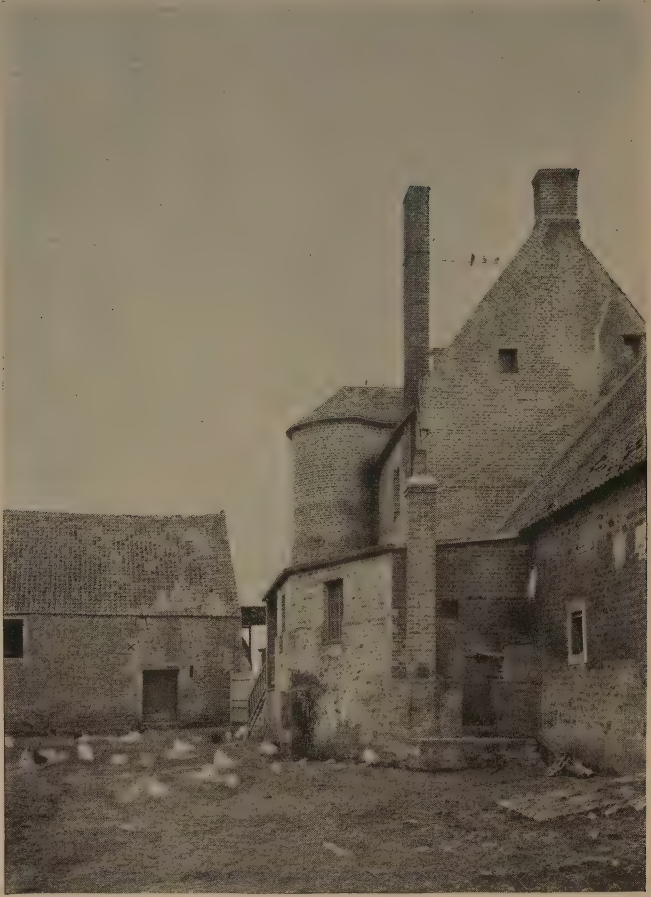


Tower and East Front
FERME LA GRANDE MAISON, BAZINGHEN



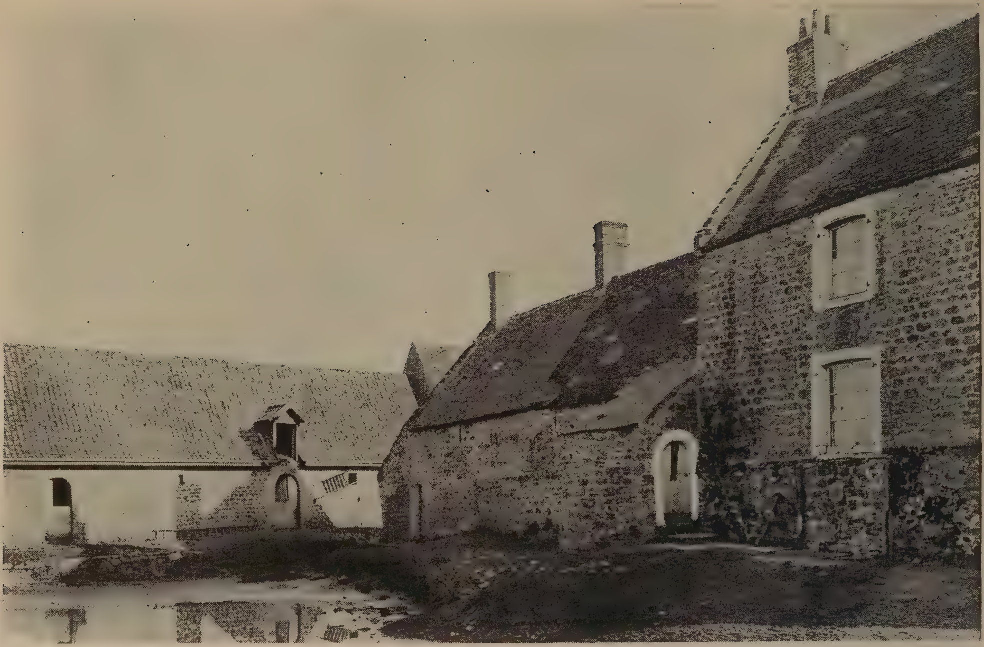
Northwest Tower
FERME LE GRAND MOULIN, NEAR ISQUES



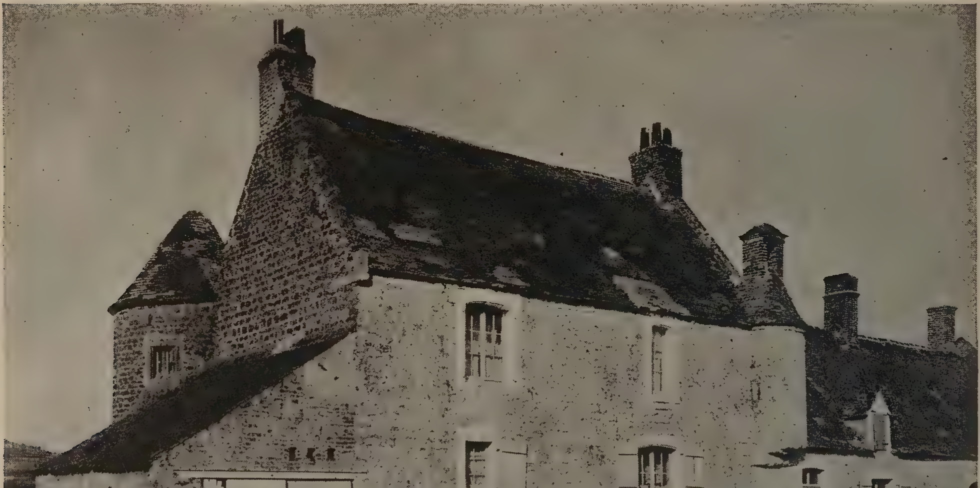


South End of House
FERME LA GRANDE MAISON, BAZINGHEN

North Front and Courtyard
FERME LA GRANDE MAISON, BAZINGHEN

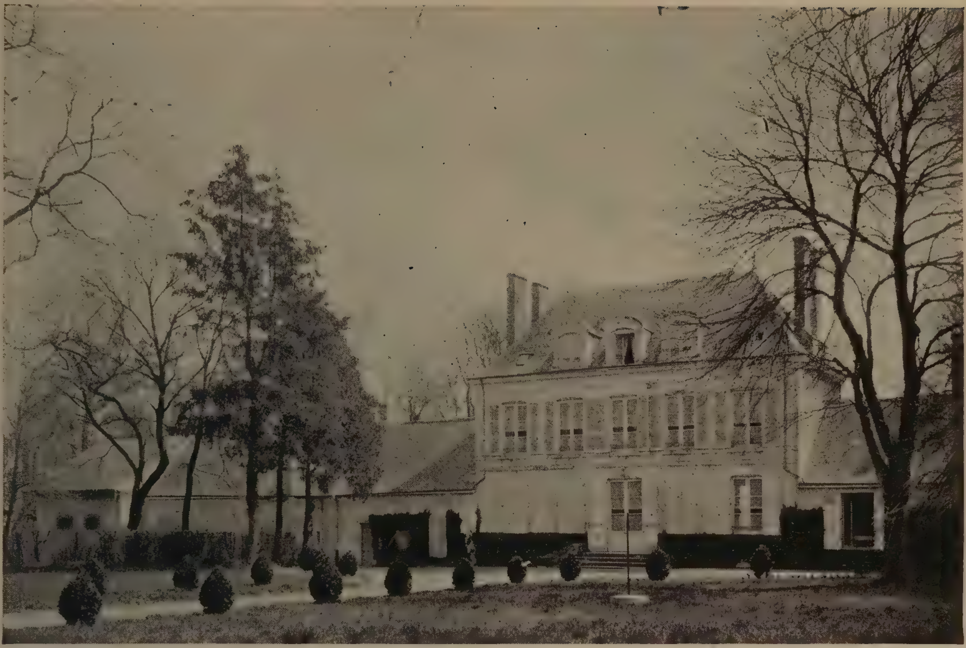


North Front, Pool and Barns

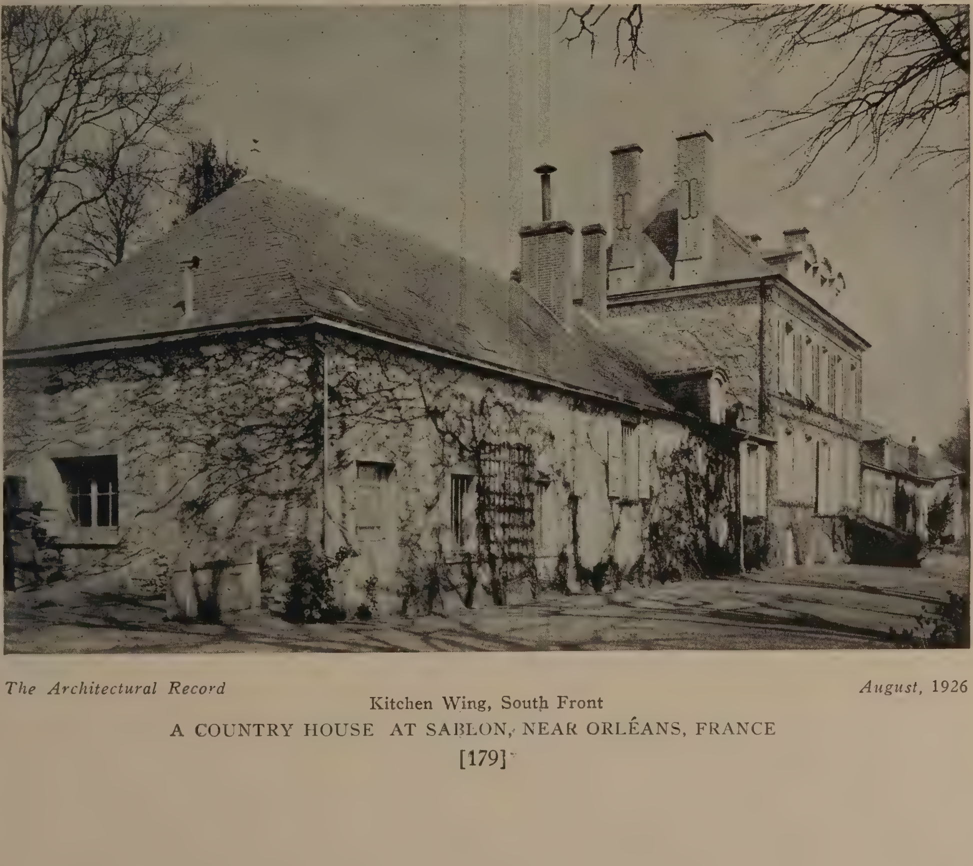


South Front and West End

FERME LE GRAND MOULIN, NEAR ISQUES, FRANCE

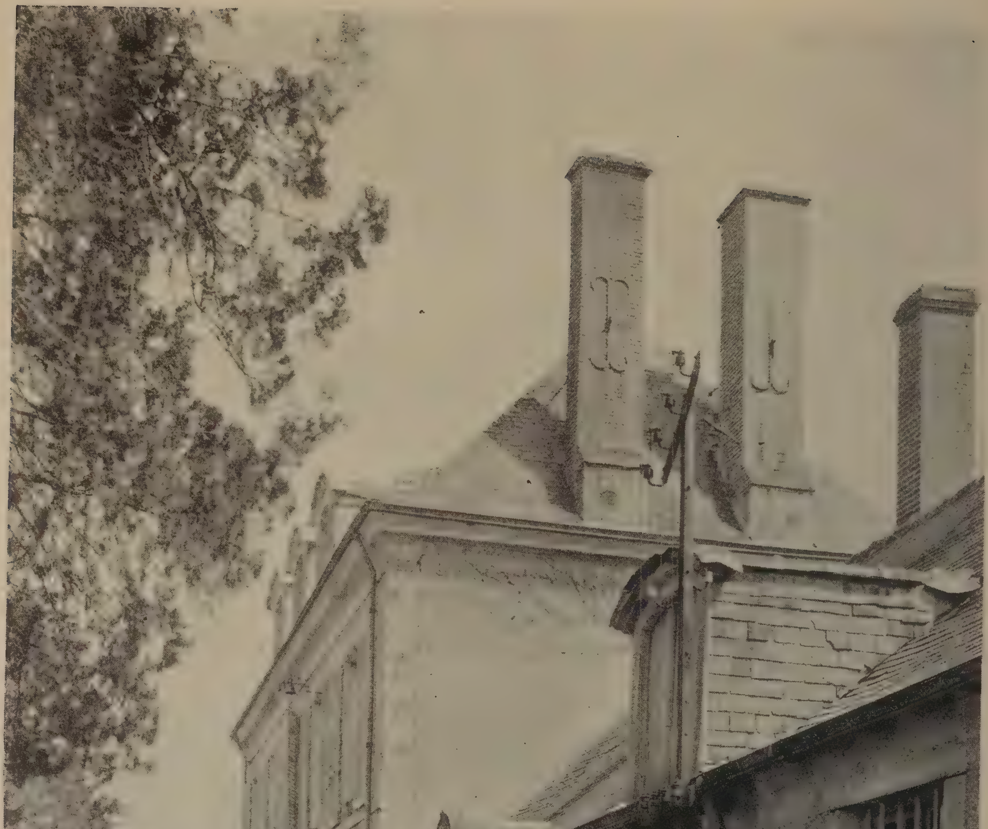


General North View



Kitchen Wing, South Front

A COUNTRY HOUSE AT SABLON, NEAR ORLÉANS, FRANCE



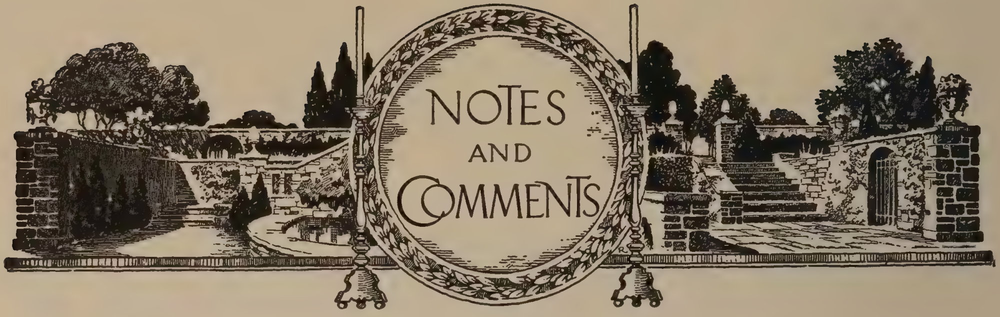
North Front
A COUNTRY HOUSE AT SABLON, NEAR ORLÉANS, FRANCE

The dwelling and all the other buildings throughout the group are constructed of the native cream-colored limestone which weathers to a soft, silvery grey, while the masonry is partly of rubble but chiefly of smallish, roughly squared blocks laid with wide mortar joints. The texture of all the walling, whether whitewashed or with the stone left in its natural state, is especially agreeable and there is no portion of it that will not well repay close scrutiny. The only brick used appears in the wall of the later lean-to addition at the west end, in the face of a dormer on the north side, in the chimneys, and in the bellcote of the *clocheton*. Fortunately, nearly all of the original roofing, consisting of small, thin, reddish tiles, is still in place and contributes greatly to the general charm.

Garden Pavilion
CHATEAU DE PONT-DE-BRIQUES

Despite the austere simplicity of the house, and the apparent absence of any features of avowedly decorative intent, there are certain details that gradually force themselves upon you and compel appreciation by their union of reticence and virility. A striking instance of this is found in the bell-turret of the south front whose Doric restraint and vigorous contour impart to it a particularly convincing quality. Again, if we examine the coping of the gables and the stonework of the windows we shall discover a certain refinement not apparent upon a first cursory glance, nor, upon more leisurely inspection, shall we overlook the homely charm of the south front dormers whose interest is altogether derived from the lines incident to their structural formation.

Along with the illustrations of Le Grand Moulin appear several illustrations and a perspective plot plan of La Grande Maison at Bazinghen. This last named farmstead still retains some traces of excellence in spite of the sweeping repairs and "improvements" carried out by a too exigent owner. Every year takes its irreparable toll of old farms and manors sacrificed to misdirected energy for modernization. Directly they fall into the hands of the renovator their character and charm are hopelessly doomed. If we would know these structures in anything approaching their pristine condition, it is imperative to pursue the study at once. As it is, few are left in their original state, and those, for the most part, in sorry dilapidation.



NOTES AND COMMENTS

Zoning and Wage-Earners' Housing

When New York City was zoned, the tenement centers of Manhattan and Brooklyn where the wage-earners live were almost entirely assigned to business or to "unrestricted" use. The evil results of permitting business to be forced into these areas, already overcrowded with buildings and people, are now so evident that, in the zoning of other cities, an effort is being made to avoid these conditions.

Zoning wage-earners' residence districts is a big problem and is complicated technically. The term "wage-earners" means a clear majority of a city's population—in New York 70 per cent of the people have family incomes of $2,500 or less. This population is spread all over the city, but it tends to concentrate most densely near the business and industrial centers of Manhattan and Brooklyn. This is the area of the "old-law" tenements, where the worst slums are, and where every effort should be made to better the living conditions. Scattered throughout these crowded tenement districts are countless small retail shops on first floors and in basements. These are the shops which are the main problem of zoning in residence districts. They cannot be ousted and it is urged that they are essential in giving shopping facilities to the residents of the districts. It was this reasoning which led to the designation of the "old-law" tenement districts of New York generally as business and unrestricted zones.

Even in the less thickly populated parts of the city, as in The Bronx and Queens, where the more prosperous of the wage-earners live, as well as the middle class, there appear to be an unusual number of business and "unrestricted" streets in the heart of the residence zones.

The evil effects of this discrimination are becoming more and more apparent. In the first place, zoning looks undemocratic to the worker, who is the voter. "We do not like to be treated as Park Avenue's back yard," declare the people of the tenement belt which parallels Park Avenue on the upper East Side. They resent the invasion of their district by big public garages which house the motors of prosperous citizens. Other business and commercial structures are being built in the tenement blocks—warehouses, loft buildings, small manufacturing plants. This business growth increases the vehicular traffic in the residence streets, and the lives of more and more children are sacrificed. In February, 1921, a count disclosed that on East 39th Street, on the block between 1st and 2nd Avenues, there were 1,790 people, of whom 714 were children under 16 years of age, including 118 babies. But under the zoning regulation a public garage could be located in the center of this block.

Lack of zoning protection increases the overcrowding of people as business is brought into tenement districts. The presence of additional workers creates social complications and it increases uncleanliness and disorder. It also decreases the already insufficient daylight and circulation of air in the housing blocks. Equally unfortunate is the stimulus given to real estate speculation. Tenement properties change hands at higher prices, not simply on their value as housing, but rather because they are valuable as potential locations for business. The landlords lack incentive to replace the housing properties with new, economic and livable apartments of the new standard. Since housing technique has developed the city block as the true unit of housing design, rehabilitation of the slums is hampered by the existence of large business structures in the blocks. As a result, the housing properties are not kept in repair and they deteriorate rapidly. Large blighted districts are thus created in the city.

Such are the results of the failure of zoning in New York City to protect the wage-earners' homes from business encroachments. A chaotic condition it is—undemocratic, creating discomfort and discord. How did it arise? Was it foreseen when the zoning regulation was framed? If it was foreseen, why was it not prevented? These were the questions which I asked recently when, in the course of studying housing, I realized this defect in zoning.

Yes, the zoners had realized the situation, I was told. They desired to protect the poor as well as the rich, but the retail store condition described above proved too big an obstacle, and so they failed to class Manhattan and Brooklyn's crowded tenement districts as residence districts. They did not, however, take this step without protests. Mr. Clarence S. Stein, the architect, suggested a solution. This was to give the neighborhoods in question a special use classification, calling them "semi-residence" districts, and defining "semi-residence" to require residence use entirely above the first floor of the buildings in the district, and to allow business use on the first floor and in the basements and cellars. The designation would also preclude public garages, stables or motor vehicle repair shops. Mr. John P. Fox, a lawyer, supported Mr. Stein's contention and he prepared in detail a map of Manhattan showing how the tenement areas could be zoned for "semi-residence" use. The objection to adopting the "semi-residence" idea seems to have been that it made the use of zoning too complicated in that particular instance. Zoning was comparatively new at that time and there was grave doubt as to how far it was constitutional. Although New York did not adopt the "semi-residence" principle then, it may yet do so, since Mayor Walker pledged himself before election to interest himself in the proper zoning of the residence districts.

The "semi-residence" use zone seems sound, and it is gratifying to learn that the idea is being successfully carried out in the zoning of other cities. Mr. Fox has incorporated it in some of the zoning regulations of Massachusetts towns and cities which he has draughted, notably Fall River, Dedham, Winchester and Arlington. In the case of Fall River, had not the "semi-residence" zone been adopted in the residence districts occupied by the wage-earners, more than half of the total area of that big industrial city would have been zoned as business, a situation which would have made the zoning manifestly defective. In the zoning of Boston, Mr. Fox points out that the object sought by the "semi-residence" idea has been attained in another way, namely, by creating zones permitting retail shops as the sole business use. As to which of the two methods is the better, that depends on circumstances, although in the case of zoning small centers or outlying districts of a large city, the "semi-residence" scheme may prove desirable, because experience shows that in these cases there are many small businesses located in the residence districts. For instance, a small contractor or artisan may have a shop or lumber yard in the rear of a large and very deep lot. Such use it may not be wise to disturb.

At any rate, it seems clear that the difficulty of zoning the residence districts of the wage-earners, which is caused by the presence of retail stores, can be overcome, and recent zoning practice is solving it with encouraging success. The housing planner, noting that success with satisfaction, begins to wonder whether it cannot be carried further. He recognizes the necessity of retail stores in housing districts, but would like to see them placed under an even stricter control, both from the viewpoint of architecture and economics.

Architecturally, it is not good planning to permit small shops on the ground floor throughout housing neighborhoods. Some of the reasons why the practice is objectionable have been stated above, but there are two others which are also serious. One is that the garden space which can be had when housing is scientifically planned, is sacrificed when most of the ground floor space in the housing block is given over to small retail shops. Also, it is better to separate the entrances to the shops and to the housing, one from the other. As an illustration, a good architectural plan suggests a long narrow block, having the shops located on the ground floor and confined to the streets on the narrow ends, thus leaving the housing to be entered from the long streets. This arrangement would carefully separate stores from homes, yet make the stores accessible from the homes.

Furthermore, from an economic point of view, some such separation of homes and business seems desirable because there are usually more shops in housing districts than there are customers to patronize them; consequently, any reduction or restriction in their number may prove to be a big economic saving. Recently I have given some attention to the economic aspect of the retail store in residence neighborhoods, and already my observations have convinced me that this factor deserves more attention than it has hitherto received. The retail store is particularly important economically in housing since it is the chief means of offsetting, by its rentals, the high land values in the crowded housing centers.

Because of the actual conditions found in most housing areas, however, the importance of high income derived from stores and from amusement centers has been underrated by some experts. They point to the low rentals which are obtained in practice from stores in housing neighborhoods as proof of their contention. The fact is that low rentals are often the result of the ruinous competition which is caused by too many stores. An excessive amount of space is devoted to stores, with a big burden of overhead, management, frequent failures, and much poor service to customers, and often a low quality of goods. This economic waste is paid for by the wage-earners in high prices.

The conditions of the retail stores in and around the wage-earners' housing of the Metropolitan Life Insurance Company in New York City strikingly illustrate these principles. In the neighborhood of the Bliss Street operation, the company provided no stores of its own, leaving this function to speculators who crowded the surrounding streets with one-story shops—"tax payers"—many more than the possible business could sustain. As a result, there are many vacancies in the store properties, poor service, many failures of shop keepers, and all of this in spite of low rentals of $80 or thereabouts a month. In contrast to this picture is the Astoria group of the company's housing. Here there are eight stores, having a total frontage of 168 feet, which are located on the avenue of a long, narrow block. These stores are of the best type, are extremely prosperous and they give the most satisfactory service—and nevertheless pay a very much higher rental.

One unfortunate result of zoning business streets in residence areas may be seen in Brooklyn, where several important avenues have been blighted by a surplus of stores. In particular, Coney Island Avenue has suffered seriously. Zoning experts, noting this and similar disasters, are now taking steps to avoid them, and they have hit upon the principle of restricting store sites in main avenues serving residence districts to intersections and corners, instead of permitting them to be located throughout the entire street frontage of the business avenue.

In residence neighborhoods of a less crowded character, the neighborhood shop finds it even harder to exist. In Washington, D. C., for example, where row housing and individual housing types prevail, the shop rentals are as low as $50 and $60. That is, the return from store space is hardly greater than the return from housing space. The store in the thickly crowded old tenement areas is too often located in a basement, and the shopkeeper and his family dwell in the rear part, a most undesirable situation.

One would like to see a thorough research made into the conditions of the retail shops in housing areas. This is needed in order to determine their bearing on housing architecture and on zoning. But from what I have seen already, I am convinced that the status of the shops and amusement buildings in housing districts generally requires rehabilitation just as much as do the housing properties themselves. A chronic state of oversupply of neighborhood stores must place a heavy burden of economic waste upon the wage-earners and must handicap unnecessarily housing planning. When it is stated that there is an average of one store for every twenty-six families in the United States, the overproduction of the small retail store is clearly indicated. For this reason, one would like to see their number scientifically restricted.

JOHN TAYLOR BOYD, JR.

International Service

Last fall I noticed an item in a New York paper describing graphically a proposed Roman skyscraper to surpass American skyscrapers in height and importance. The mere thought of such an aggressive and modern addition to the skyline of Rome shocked my idea of the proprieties. While appreciating the fact that the overpowering tower was proposed not to belittle Rome, but to prove the capacity of modern Romans, I felt it would mar views in which the world has a moral, if not vested, right.

Rome, sacred because of the accomplishments of its people, should be zealously guarded against anything that would belittle or mar its memories. Its influence in architecture, engineering, literature, art and athletics dominated the ancient and Renaissance world. This influence persists as a guiding principle to the present day. I could not think of a steel tower clothed in stone or concrete, dominating Rome from far and near, overshadowing and marring the beauty of Saint Peter's dome, as anything less than a disaster—a disaster which I saw no way of preventing.

In a recent interview with Cass Gilbert, I was much pleased to find that the newspaper notices while attracting his attention impressed him with the danger of a serious artistic error. This strong impression induced him to write personally to Mussolini explaining the cause of his fears. He felt strongly that a high tower of the skyscraper type would mar the beauty and reduce the scale of all the great buildings in Rome. In the interests of future generations these historic monuments and artistic treasures should never be belittled or overshadowed. He called attention to the charm, beauty and dignity of Saint Peter's dome as it rises above the city, when seen from the Campagna, and surrounding country. No structure as high or higher should be allowed to alter the scale or mar these charming views. He expressed his opinion that while a towering building eleven hundred feet high might be a glorious thing in itself it would be inevitably detrimental to the aesthetic effect of the city. No one should attempt because of mechanical knowledge and facilities to compete with Michael Angelo. Gilbert quoted a remarkable letter written in A.D. 545 by Belisarius to the Barbarian Chief Tortila when it was thought Rome might fall. I quote some extracts from this letter.

"Of all cities under the sun, Rome is confessed to be the greatest and most glorious. . . . The united efforts of some of the noblest of men . . . . a lavish expenditure of wealth, the most costly materials, the most skillful craftsmen of the world have united to make Rome. . . . Any act of wanton outrage against this city will be resented as an injustice by the men of all ages, by those who have gone before because it effaces the memorials of their greatness, by those who shall come after, since the most wonderful spot in the world will be no longer visible."

While the plea of Belisarius was to guard against wanton destruction, Gilbert's plea was to guard against the dangers of additions which, although intended to enhance the effect, would mar or destroy beautiful historic views. He made a constructive suggestion that Mussolini's architect be asked to design a development that would be in harmony with the traditions of Rome, mentioning the completion of the approaches to Saint Peter's to give an open vista from the Ponte St. Angelo to the façade of the Cathedral.

Nothing was heard from the letter for some time. Recently a distinguished Italian who was visiting this country informed a friend of the Fine Arts that Mussolini in directing the development of the city improvements gave the officials a letter from a New York architect with instructions to follow its suggestions.

If the suggestions of Gilbert have prevented the skyscraper in Rome and will open a view from the bridge of Saint Angelo to Saint Peter's, or restore the fora of Augustus, he will have performed an international service to art—a service worthy of his new dignity as President of the National Academy of Design.

GLENN BROWN.

"THE DARK DAYS OF '63"
A Mural Painting by Harvey Dunn, Created for the Lord & Taylor Centennial

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A Note of Explanation

It is sometimes difficult to clothe the events of thirty years past with the strictest accuracy, and occasionally, even with the greatest care and most painstaking research, a solecism will crop up, as one might say. In all fairness an explanation is due in reference to a certain incident recorded in Part VI of Boston Dry Points published in our June issue. We are very glad to reproduce the following: Ed.

June 11, 1926.

Mr. Hubert G. Ripley,

Sir:

After a hasty reading of the episode concerning your humble servant in the current Record and making due acknowledgment of the mythical qualities ascribed to me therein, one cannot but feel that the latter part of that incident is no innocent recital of facts, but a cunningly arranged sequence of events with a low down Town Topical Touch devised with fiendish ingenuity to make of a hitherto spotless reputation a hissing and a by word.

As to the poem, if without offence to God or man I may be allowed to refer to it as such, I was approached by a "certain party" (as Benny Brooks would say) who for reasons of State must remain nameless and who has since become a writer whose fountain pen I am unworthy to fill. This party gave such a glowing, dazzling, vivid description of something between a new born angel and a Mohammedan's hopes of the hereafter, that I was prevailed upon to attempt to put it in verse, and now look at the dern thing. I never saw the strawberry blonde, either before or after she reached what I am convinced was her proper setting, but from quotations such as "Why your han's *jus like* a gemman friend of mine from Georgia," I gathered such was not the case with others.

As to that touching inference to a lost love—constancy—broken heart, et al., I merely suggest that "before I was married I was miserable."

Also if Tennyson had lived to outlive "And in my veins was that strange stir, which clothes with bloom the almond trees," he might have changed those famous lines of his

"I feel it when I sorrow most,
'Tis better to have loved and lost
Than never to have lost at all."

Yours, E. F. M.

L'ENVOI

The poet Mirtyz Mohammed-Ali to his friend Abou-Hassem in Algeziras.

"O Hassem, greeting! Peace be thine,
With thee and thine be all things well!
Give refuge to these words of mine.
The strange mischance that late befell
Thy servant must have reached thine ear;
Rumor has flung it far and wide,
With dark additions, as I hear
When They-Say speaks what ill betides!
So lend no credence, O my friend,
To scandals, fattening as they fly.
Love signs and seals the roll I send:
Read thou with lenient eye."

Corrections

We regret that an error was made in the caption appearing under the cut on Page 89 of our July issue, which should have read as follows: Model of Pediment to be carved in sandstone for Philadelphia Museum of Art, designed and modelled by Paul Jennewein. C. L. Borie, Jr., Horace Trumbauer and C. C. Zantzinger, Associated Architects.

Also, on page 565 of our June issue, in the last line of the second column, the word "alternation" should read "attenuation," ". . . that it tends to excessive attenuation of supports . . ."

A New Limestone Company

Announcement is made of the organization of the Indiana Limestone Company, capitalized at $40,000,000 under the presidency of A. E. Dickinson and with Lawrence H. Whiting as chairman of the Board of Directors. The new company is composed of twenty-four limestone companies embracing the largest operating companies in the Bedford and Bloomington, Indiana, district, recently bought by Mr. Whiting, who is president of the Michigan Boulevard Bridge Bank of Chicago and of the firm of Whiting & Company.

The officials of the new company announce that the consolidation of the twenty-four limestone companies does not embrace any substantial portion of the cutting and fabricating plants of the country, but only such of the cutting mills in the Indiana Limestone distrct as are owned by or are more or less closely affiliated with quarry operating companies. A number of large cut stone firms in the Indiana district are not included.

The present Indiana Limestone Quarrymen's Association will become the promotion department of the new company with headquarters at Bedford, Indiana and executive offices in the Tribune Tower, Chicago.

It is stated that the consolidation will result in economies in production, and in the development of markets for by-products of building stone quarries. It will be possible to control to a greater degree the classification or grading of limestone and to put into effect certain standardizations.

A number of new sales and service offices will be established in important cities of the country from coast to coast.

The Old Mission Churches and Historic Houses of California*

The Californian mission churches are not old, The Texan and New Mexican are older. The Californian missions were established very rapidly one after the other by Franciscan friars in the fifty years following 1769. Of the twenty-one from San Diego, (1769) to San Francisco de Salano, (1823), eighteen were founded before the end of the century, and nine by Father Junípero. Both the first churches were small and soon disappeared. The San Diego church, whose ruins still remain, was built about 1812. The Santa Barbara buildings, all still in good condition and use, date from 1815 to 1820. The sense of antiquity which one has regarding them, is of the antiquity of a vanished era, the antiquity of a contrast. The missions stand apart from modern California in a solitude and distinction as striking as a Roman arch or medieval cathedral in a modern French city. The friars who built them were medieval in feeling, and the atmosphere of the missions is far older than their date. Modern America has swept over them. The missions and the hotel beside it are only a hundred years apart in dates, but four or five hundred years in their cultural sources.

The flourishing period of the mission system was the first fifteen years of the century. Mexico became independent in 1821, and the California missions were all secularized in 1834. The immediate results were disastrous for the Indians. However paternal the rule of the friars, it was more competent and more humane than that of the Mexican authorities. In a few years the missions were ruined and most of the Indians had fled. In 1845 the lands were sold to settlers. After the American occupation, however, a small portion of the lands was restored. Secularization sooner or later was no doubt necessary, but the friars were better civilizers than any of the authorities succeeding them for a long time.

The ordinary building material was adobe, or sun dried brick, stuccoed and whitewashed, with wooden rafters and tiled roofs. Then some of the more prosperous and ambitious began to employ stone and burned brick, especially for arches and trimmings. An adobe wall had to be very thick because of its low bearing power. The walls of San Luis Rey are laid in diagonal pattern with concrete joints of mortar and rubble. In general the later the date the more stone was used. Had the mission era lasted longer, there would have been finer and more enduring architecture. The churches at Santa Barbara, San Buenaventura, San Carlos Borromeo, San Gabriel, are all stone.

"The structural system used may be said to be of three kinds, namely: the post and lintel, the arch and pier, and the truss. Thus the padres used all the constructive systems that in their time had been developed." The roof trusses, however, were hardly "real trusses," either because the padres did not know the principle of the truss, or for lack of metal. The long narrow naves were conditioned by the length of timbers to cover the span, and sometimes they were supported in the middle by a post. In the absence of iron the rough timbers (as at San Fernando 1797 and San Francisco de Assis 1776) were bound with rawhide thongs. At San Carlos Borromeo the original roof timber and tile were supported by three stone arches spanning the nave; but stone arches, not very well built, were seldom able to withstand earthquakes.

As a rule the architects were the padres themselves, though some craftsmen were found among the soldiers and artisans sent into the province. They wrought in the fashion of their native Spain, with enthusiasm, with rivalry of each other, with poor

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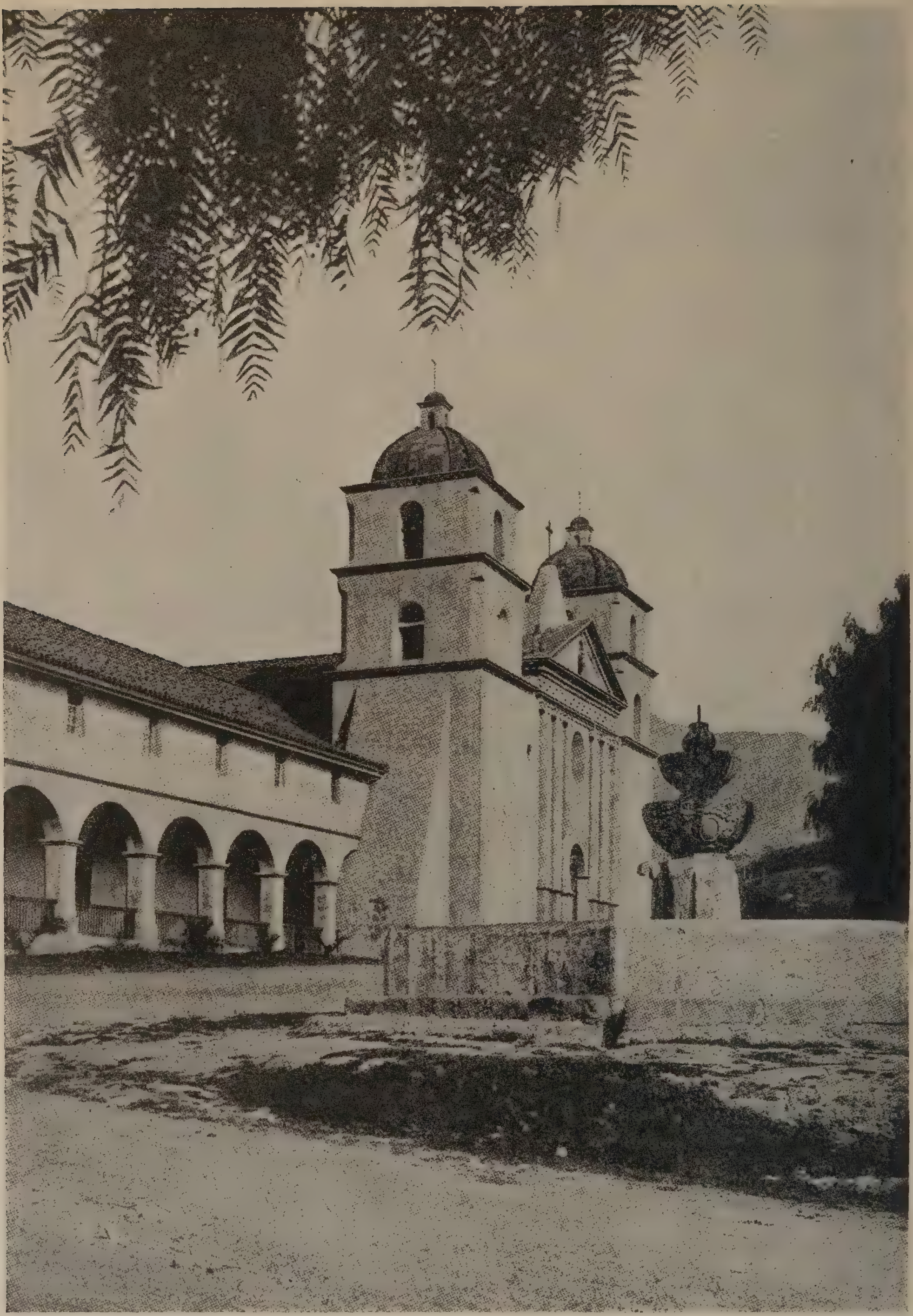
[*] *The Old Mission Churches and Historic Houses of California. Their History, Architecture, Art and Lore. By Rexford Newcomb, M. A., M..Arch., A.I.A. J. B. Lippincott Company, Philadelphia and London,* 1925. *Price* $15.00.



MISSION SANTA BARBARA

Illustration from *The Old Mission Churches and Historic Houses of California*

MISSION SAN GABRIEL ARCANGEL
From *The Old Mission Churches and Historic Houses of California*

materials and poorer labor; and yet the result was simple, sane and craftsman-like. It follows the old Spanish traditions, but it has the naive qualities of primitive architecture, frank, bold masses and rhythmic forms.

The Spanish colonial style of Mexico was one of the most elaborate of styles. It was more frankly organic and expressive of structure than was usual in Spain, and extraordinarily florid in detail. Mexico is also a land of domes. Nearly every village has its domed churches, nearly always "one shelled," usually covered with various colored tiles, and crowned with a Renaissance lantern. Mexican architecture followed the changes taking place in the mother country, but lagged behind it in point of time. The immense wealth of the mines made the church wealthy, which explains the great amount of elaborate work on Mexican churches.

Some of the churches in Texas show the reflection of this attempted magnificence. But the California missions were poor and far away. Their churches were built in the good proportion generally characteristic of Mexican work, but the degraded decoration is entirely absent. The padres and the Indians were humble people and built simply.

The distinguishing features of California mission style are somewhat as follows: massive walls often with buttresses; arcaded corridors, arches carried on piers, curved pedimented gables, terraced bell towers with lanterns, pierced campinarios (bell walls and towers), patios with fountain or garden, broad undecorated wall faces, wide projecting eaves, low-pitched red tile roofs. Some of these features, such as the first, and the last four, were present in practically all the missions.

So far as I know this architecture has never, before Mr. Newcomb, been studied so thoroughly, nor given so fully, nor the social life of that brief Spanish era presented from the evidence of its architectural remains. Naturally the chief remains are the missions, and in particular the churches. The bulk of his book is devoted to the study of mission architecture. It begins with a very good historical sketch, and presently turns to a detailed study of each separate mission, its story and its architecture, starting from San Diego and following the old trail up the coast to the cluster around San Francisco Bay.

But there was also a domestic architecture

MISSION SAN BUENAVENTURA
From *The Old Mission Churches and Historic Houses of California*

Illustration from *The Old Mission Churches and Historic Houses of California*

of pueblos, ranches and haciendas, that is, respectively, towns, stock farms and plantations. They were for the most part low buildings, of whitewash adobe and red tile, and very plain outside. Architectural detail and planning were confined to the inner courts. The Spanish period was the era of the missions; the Mexican the era of the pueblos, such as Santa Barbara and Monterey. The houses of importance in Monterey were of two general classes, the square hip roof type with "lean-to" of one story, and the long gabled houses with gables parallel to the street.

The volume is profusely illustrated, with many scale drawings and studies of detail, as well as interesting examples of modern California architecture designed after the Spanish-colonial style.

The earlier architectural impulses of the Americans in California were to copy the east. San Francisco and Los Angeles imitated New York. Mansard roofs, and Queen Anne cottages flourished by the Pacific. But the later movement is back to the Spanish; and inasmuch as the climate is essentially Mediterranean, one cannot but feel that this is a thing of sounder foundations. The old California architecture was straightforward and sincere. It had honest craftsmanship and a style. The Spanish colonial is an architecture appropriate to the climate and the Hispanic background of California. In fact any part of the United States (such as the Gulf states and the whole South west) where the climate conditions favor the use of patios and arcades, invites the study and adoption of Spanish colonial forms.

Drawing. Its History and Uses. By: W. A. S. Benson. With a Memoir by the Hon. W. N. Bruce, C. B. New York: Oxford University Press. 1925. 1st ed. xxxiii. 109 pp. Ill. 5¼ x 8 in. Cloth. $2.25.

When W. A. S. Benson died in July, 1924, the world of art lost a man of marked talent, and of far-reaching influence. His posthumous book is full of inspiration and incisive comment, and will be found valuable by every architect and reader.

Sketching in Lead Pencil for Architects and Others. By: Jasper Salwey, A. R. I. B. A. New York: Charles Scribner's Sons. 1926. 1st ed. i. 174 pp. Ill. 5½ x 8⅝ in. Bound in Boards. $3.00.

Concerned, as the author says, with "sketching" as differentiated from the making of drawings, and therefore to be considered as a pendant to his previous book, "The Art of Drawing in Lead Pencil." Contains instructions in a carefully considered method which is deemed most suited to direct work in the open air, with a special view to developing the best technique.

New Building Estimators' Handbook, by William Arthur. New York: Scientific Book Corporation, 1926, 14th ed. xviii, 1018 pp. Ill. 4¾ x 7 in. Flexible fabrikoid. $6.00.

The author has made a genuine contribution to the building trade by supplying a compact and authoritative guide, presented in a way that makes it usable and invaluable to every architect, contractor, builder and engineer. Mr. Arthur's experience has covered a great number of years in building estimating, a large share of which has been for the leading railroads of this country, and in compiling this book, he has drawn upon not only his own experience, but in addition, that of the leading industrial concerns in America allied with the building trade. In a concise and understandable way, he has taken this data and presented it in the form of a ready reference guide.

Bodiam Castle, Sussex. A Historical and Descriptive Survey by The Marquis Curzon of Kedleston, K.G., Boston, Mass. Houghton Mifflin Co., 1926. 1st ed. xiv. 164 pp. Ill. 8½ x 11 in. Cloth. $10.00.

A few months before his death, arrangements had been made with the late Lord Curzon to prepare a series of volumes dealing with the various country houses and castles which he had occupied during his life. Of the series, this volume alone was completed before his death, and will remain his one outstanding literary production, written *con amore,* elaborately illustrated, and giving the full history and description of one of the most beautiful, interesting, and typical old castles in England.

RECENT PUBLICATIONS
issued by manufacturers of construction materials and equipment.

[*These may be secured by architects on request direct from the firms that issue them, free of charge unless otherwise noted.*]

Cast Iron Pipe Inspection. Standard specifications for cast iron pipe and special castings. Standard dimensions, thickness and weights of cast iron pipe, also specifications of de Lavaus centrifugally cast, cast iron pipe. General information concerning cast iron pipe. Robert W. Hunt Co., Engineers, 2200, Insurance Exchange Bldg., Chicago, Ill. 3¾ x 7 in. 28 pp. Ill.

Glass, Plate. "The making and use of plate glass." Early American activities, the modern manufacture and new uses. Pittsburgh Plate Glass Co., Dept. A.R. 2, Frick Bldg., Pittsburgh, Pa. 4¼ x 7 in. 20 pp. Ill.

Partitions. A. I. A. No. 19 E. 61. Acme Vertical Partitions, Type "J." Folder giving full description with sectional diagrams. Acme Partition Co., 3535 Peralta Street, Oakland, Cal. 8⅛ x 10⅞ in. Ill.

Refrigerators. Catalog No. 56. Refrigerators and cooling rooms for hotels, restaurants, hospitals, institutions, colleges and clubs. Description of construction of various models in stock and built to order. Data for mechanical refrigeration. McCray Refrigerator Sales Corp., 662 Lake St., Kendallville, Ind. 7⅜ x 10⅛ in. 52 pp. Ill.

Brick Pavements. "The Construction of Vitrified Brick Pavements." General information in relation to the building of pavements and roads with recommended specifications. National Paving Brick Mfg. Assoc., Engineers Bldg., Cleveland, Ohio. 6 x 9 in. 92 pp. Ill.

Bronze. "Ornamental Bronze" Entrances and Store Fronts. Series A. A. I. A. File 15a1. Examples of modern American design and craftsmanship. XXXII plates selected by a jury of architects. Copper and Brass Research Association, 25 Broadway, New York City, N. Y. 8⅜ x 10⅞ in. 84 pp. Plate illustrations.

Venetian Blinds. "Daylight Control Plus Ventilation." Typical installations and advantages. Details of construction. Testimonials. Western Venetian Blind Co., 27th and Long Beach Ave., Los Angeles, Cal. 8 x 11 in. 66 pp. Ill.

"Fold-Away" Rooms. A. I. A. File No. 19e7. Illustrated folder of "Fold-Away" rooms that hide in the wall, dining rooms and breakfast rooms. Specifications and installation directions, diagrams and instructions. Fain Mfg. Co., 313 National Bank of Commerce Bldg., Norfolk, Va. 8½ x 11 in.

Metropolitan Museum of Art. A Brief Guide to the Cloisters, by Mr. Joseph Breck. General and particular information concerning interior and exterior of the building. Information concerning admission, assistance in studying the collection and permits for copying and photographing. The Metropolitan Museum of Art, 5th Ave. and 82nd St., New York City, N. Y. 5½ x 8¾ in. 58 pp. Ill. 50c.

Projected Sash. Catalogue No. 12. A. I. A. File No. 16e1. Architectural and industrial types with standard sash units and specifications. Wall, screen and shade details. David Lupton's Sons Co., 2209 E. Allegheny Ave., Philadelphia, Pa. 8½ x 11 in. 24 pp. Ill.

Hotel Equipment, etc. General Catalog No. E-28 of equipment, furnishings and supplies for hotels, restaurants, clubs and institutions, including china, glass and silverware, linens, cooking equipment, disappearing beds, show cases, etc. Albert Pick & Co. (Albert Pick, Barth & Co., Inc.) 208-224 West Randolph Street, Chicago, Ill. 8¼ x 11¼ in. 368 pp. Ill.

"Sylphon" Heating Specialties. Catalog No. 200. Articles relating to heating and temperature regulation, including Bellows, Interlocking Valves. Damper Regulators, Radiator Shields and Covers. Engineering Data and Charts. The Fulton Co., Knoxville, Tenn. 3¾ x 6¾ in. 192 pp. Ill.

Switch Panelboards. Bulletin No. 37. The new NRSS Flush Service Switch Panelboard with the safety panelboard door open. Explanatory diagram. Special features and their advantages. Specifications for cottage or small bungalow. Diagrams of connections. Uses for fan hanger outlets. Frank Adam Electric Co., 3649 Bell Ave., St. Louis, Mo. 7¾ x 10½ in. 8 pp. Ill.

Bath Room Accessories. Handbook N. Silver soldered accessories for the bathroom and lavatory. Mirrors to specifications for institutional and commercial building installations. One-piece recess steel medicine cabinets. J. P. Eustis Mfg. Co., 12-16 Ames Street, Cambridge, Mass. 7¾ x 10⅜ in. 84 pp. Ill.

Blue Printing Machines. Pease Junior Blue Printing Machine and Junior Sheet Washer, for the moderate user of blue prints. Folder giving description and method of use. The C. F. Pease Co., 877 North Franklin Street, Chicago, Ill. 6 x 9 in. Ill.

Concrete Products. Materials used in the manufacture of concrete products. Concrete blocks and specifications for waterproofed concrete blocks. Uses and sizes of hollow concrete tile and cement brick. Cement floor tile and architectural trim stone. Concrete roofing tile. Ornamental concrete products. Figures as to mixes, methods, etc. Sandusky Cement Co., 1002 Engineers Bldg., Cleveland, Ohio. 8½ x 11 in. 36 pp. Ill.

Zinc. "Once in a Lifetime." Advantages of zinc for roofs, leaders, gutters, valleys and flashings. Superiority of zinc and typical installations. Testimonials. New Jersey Zinc Co., 160 Front Street, New York City, N. Y. 5⅝ x 8 in. 32 pp. Ill.

Painting, Varnishing, Enameling. A. I. A. File No. 25c. Complete specification manual for painting, varnishing and enameling interior and exterior wood, plaster and metal work. The proper selection of woods and the correct finish. Pratt & Lambert, Inc., 73-97 Tonawanda Street, Buffalo, N. Y. 7½ x 10⅝ in. 38 pp.

Pine Woods. "Introducing Cal. Pine." Description of the grades of white and sugar pine with information as to the uses, sizes and forms of the material. Sidings, lath and moulding patterns. California White & Sugar Pine Manufacturers Association, 600 Call Bldg., San Francisco, Cal. 7¾ x 10¾ in. 48 pp. Ill.

Bathrooms. "New Ideas for Bathrooms." Suggesting floor plans, color schemes, treatments for walls and floors, new modes in fixtures and appointments. Blue prints and detailed information and particulars. Crane Co., 836 South Michigan Ave., Chicago, Ill. 8½ x 11 in. 48 pp. Ill.

Cement. "What Twelve Men Said About Carney." Opinions of Architects and contractors. Typical installations. The Carney Co., Mankato, Minn. 8½ x 11 in. 20 pp. Ill.

Concrete Floors. Series of three folders. No. 1 Detailed information on planning and construction of floors and flooring surfaces. Description and specifications of metallic hardener, mastermix, colormix, saniseal, etc., including concrete floor enamel, accelerators and freezeproofers, 9 x 11¾ in. 19 loose leaf sheets. No. 2 Waterproofings, dampproofings and allied products. Descriptions and specifications. 9 x 11¾ in. 17 looseleaf sheets. No. 3 Nine specimen blocks of hardened concrete. Master Builders Co., Cleveland, Ohio. 9 x 11¾ in.

Concrete. "The Concrete of the Architect and Sculptor," by John J. Earley with an introduction by Lorado Taft. The ability of concrete as a medium for sculpture, with typical illustrations. Portland Cement Association, 33 West Grand Ave., Chicago, Ill. 8½ x 11 in. 12 pp. Ill.

Pinewood. "The Greater Strength of Southern Yellow Pine." A monograph in which is discussed the stresses to which structural timbers may be subjected, and including recommendations for the correct use of southern yellow pine. Southern Pine Association, New Orleans, La. 8½ x 11 in. 12 pp. Ill.

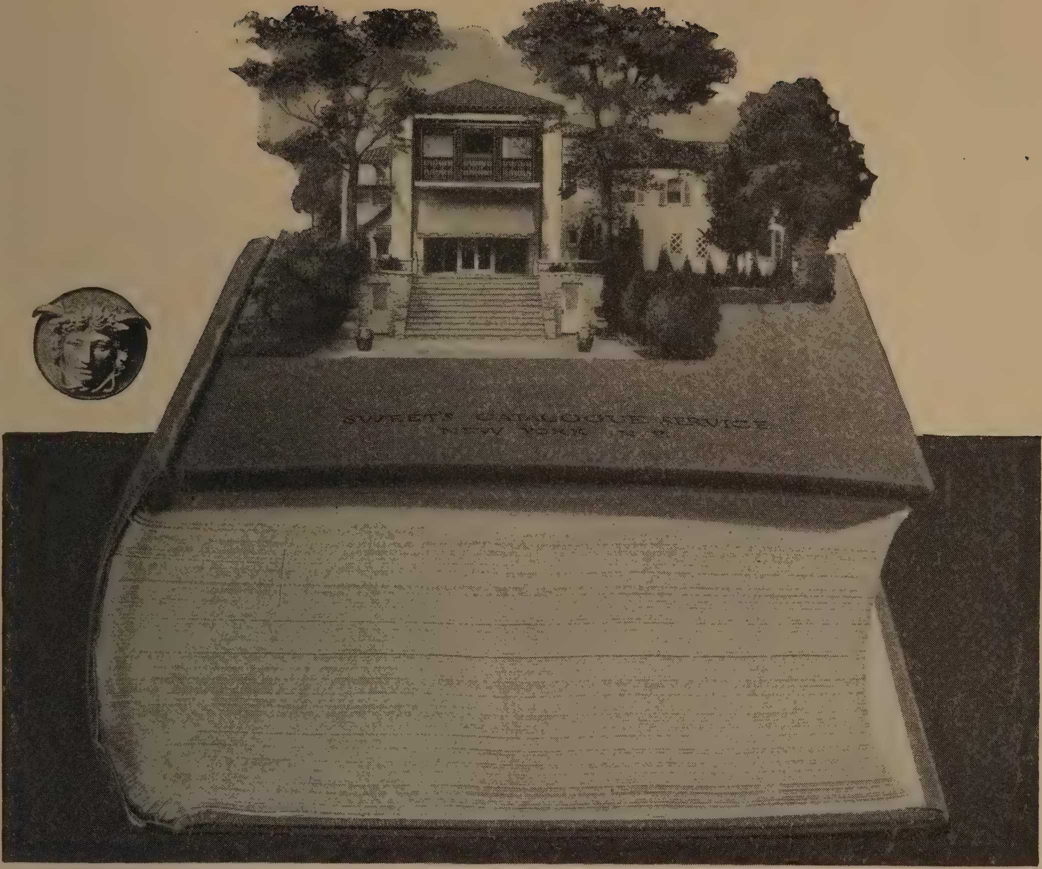
Fences, Gates and Railings. Specification Manual No. 60, containing complete specifications, scale drawings, details and dimensions, architects' specification clauses and other data. Anchor Post Iron Works, 9 East 38th St., New York City. 8½ x 11 in. 94 pp. Ill.

Fireproofing. The Fireproofing Handbook. 9th edition. Containing descriptive and illustrative material on the most complete line of steel building products for firesafe, modern construction. Comprehensive treatment of the uses of General Fireproofing Steel Building Products, Dept. B-J., Youngstown, Ohio. 8½ x 11 in. 32 pp. Ill.

Hardware. 1926 Catalogue of locks and hardware. A complete series of builders' hardware with full particulars, including size, weight, price and packing. Description of each article with use and method of operation. Details to which standard hardware can be applied. Sargent & Co., New Haven, Conn. 9⅛ x 12¼ in. 504 pages. Ill.

Valves. Instruction and data book for Bridgeport-Keating Flush Valves. Bulletin No. 24. Descriptions of the various models and installation instructions. Bridgeport Brass Co., Bridgeport, Conn. 3⅞ x 9 in. 16 pp. Ill.

Drains. Ready reference Folder No. 2. Floor and roof drains, details and particulars. Swimming pool equipment. The Josam Manufacturing Co., 4900 Euclid Bldg., Cleveland, Ohio. 6¾ x 9¾ in. 12 pp. Ill.



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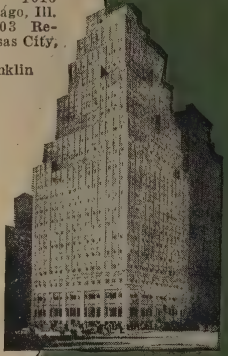
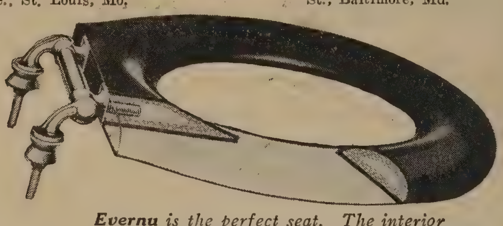


Office Building, John and Gol Sts., New Yor City; Buchma & Kahn, Arch ects.



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The ARCHITECTVRAL RECORD

SEPTEMBER 1926

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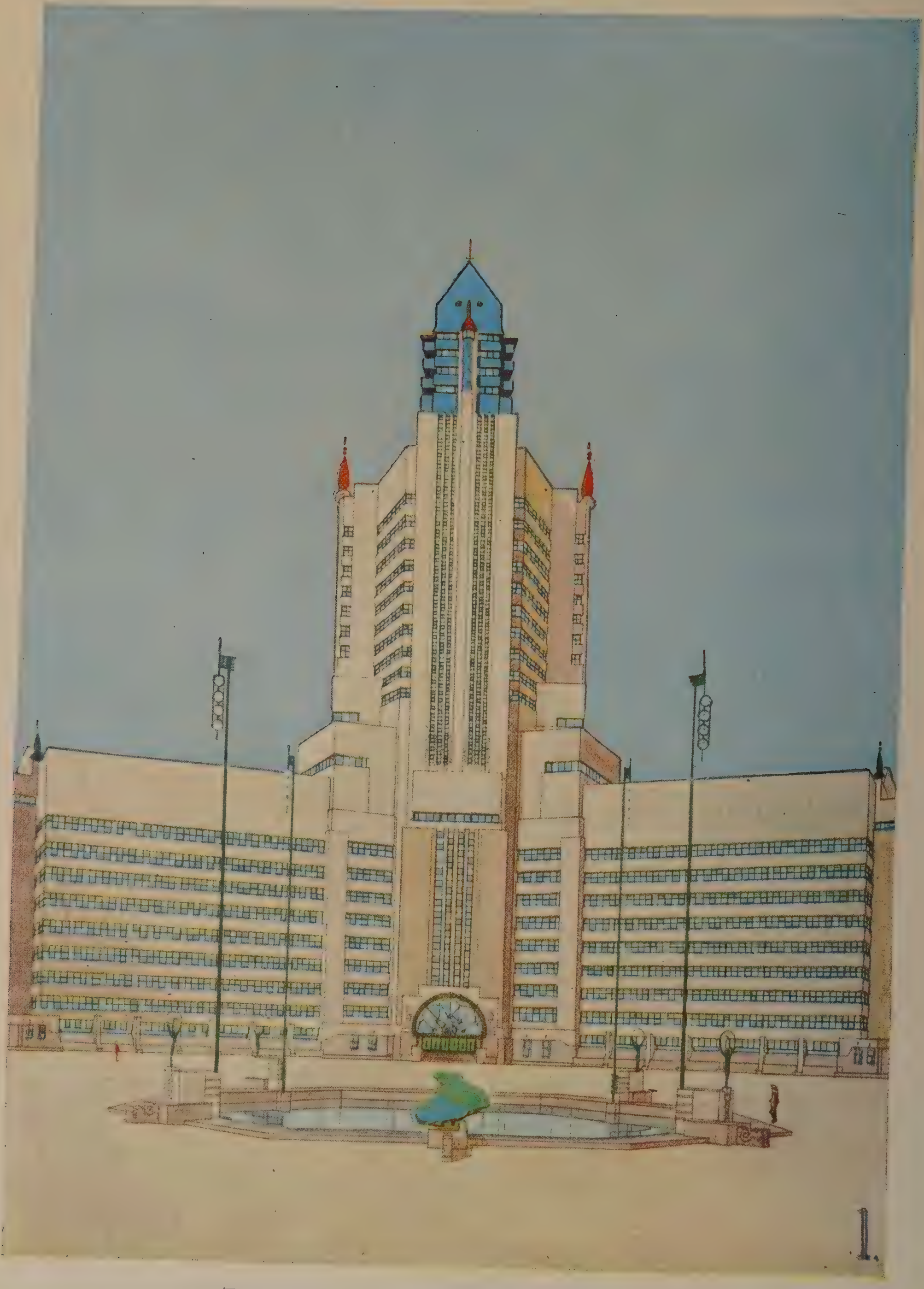


Design for a Polytechnic School.

J. Beckening Vinckers.

The
ARCHITECTVRAL
RECORD

VOLUME 60 SEPTEMBER, 1926 NUMBER 3

MODERNISM IN ARCHITECTVRE

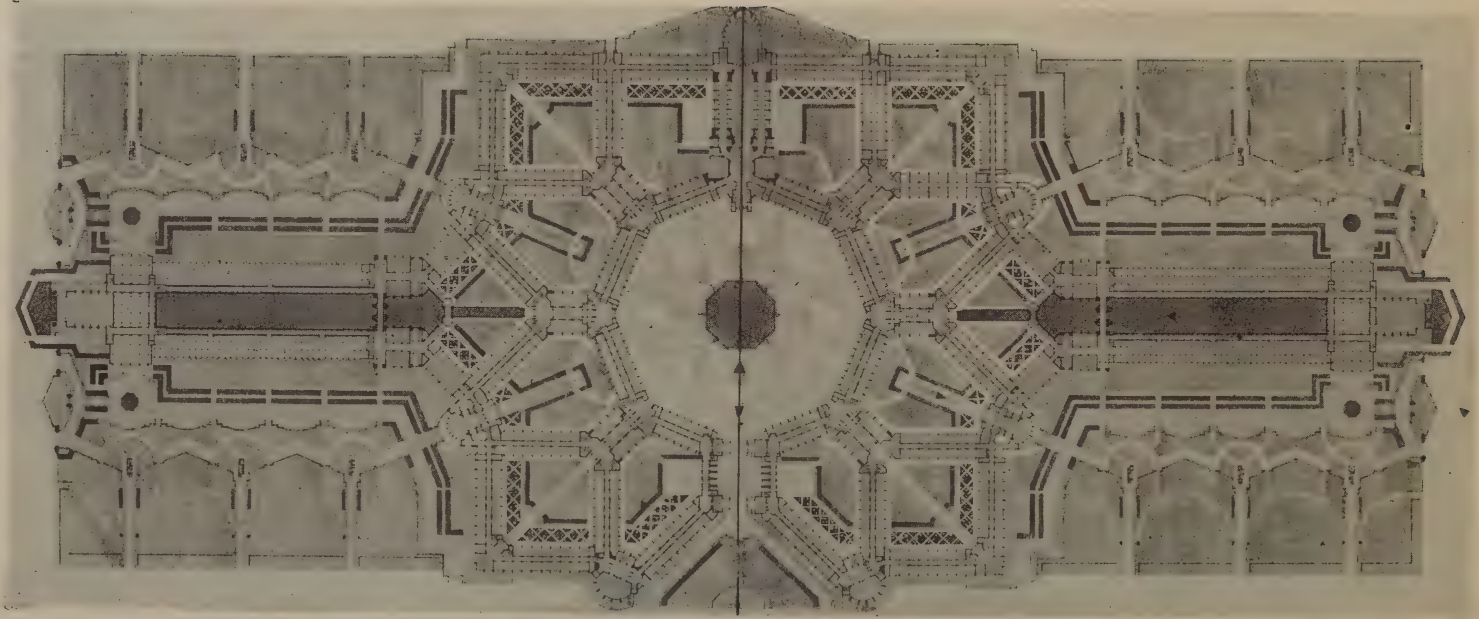
ILLVSTRATED WITH A DESIGN BY J BECKENING VINCKERS *for* A POLYTECHNIC SCHOOL

By
Leon V. Solon

TECHNIQUE, IN ALL the arts, might be defined as the formulation of convenient methods for manipulating physical vehicles employed for externalizing an aesthetic content. All those unified directions for artistic impulse which we recognize under stylistic designations are identified with techniques. Each so-called style or type has evolved within a distinct imaginative sphere and is the means wherewith some self-contained artistic purpose is stated. The physical media, even when identical, employed in each type of expression, must consequently be endowed with pertinent significance through the manner of their utilization or, in other words, through the formulation of a distinctive technique. A norm in technique is inconceivable, as irrational as a norm in artistic expression. Artistic objective differs in each stylistic type; hence the difference in the manner in which inherent capacities in medium are developed through technique. It is through technique that vital abstract qualities are realized in effect; techniques are not interchangeable in activities directed to unrelated artistic objectives.

When some novel view-point commences to actuate artistic expression, it involves the creation of new attributes in medium, and a revision of proportional relations in constituent elements. The movement passes through an experimental stage, during which every available factor is appraised from a new basis in accordance with its capacity to serve the new purpose, and achieve an unprecedented ideal. This applies to changes of direction for impulse in all the creative arts.

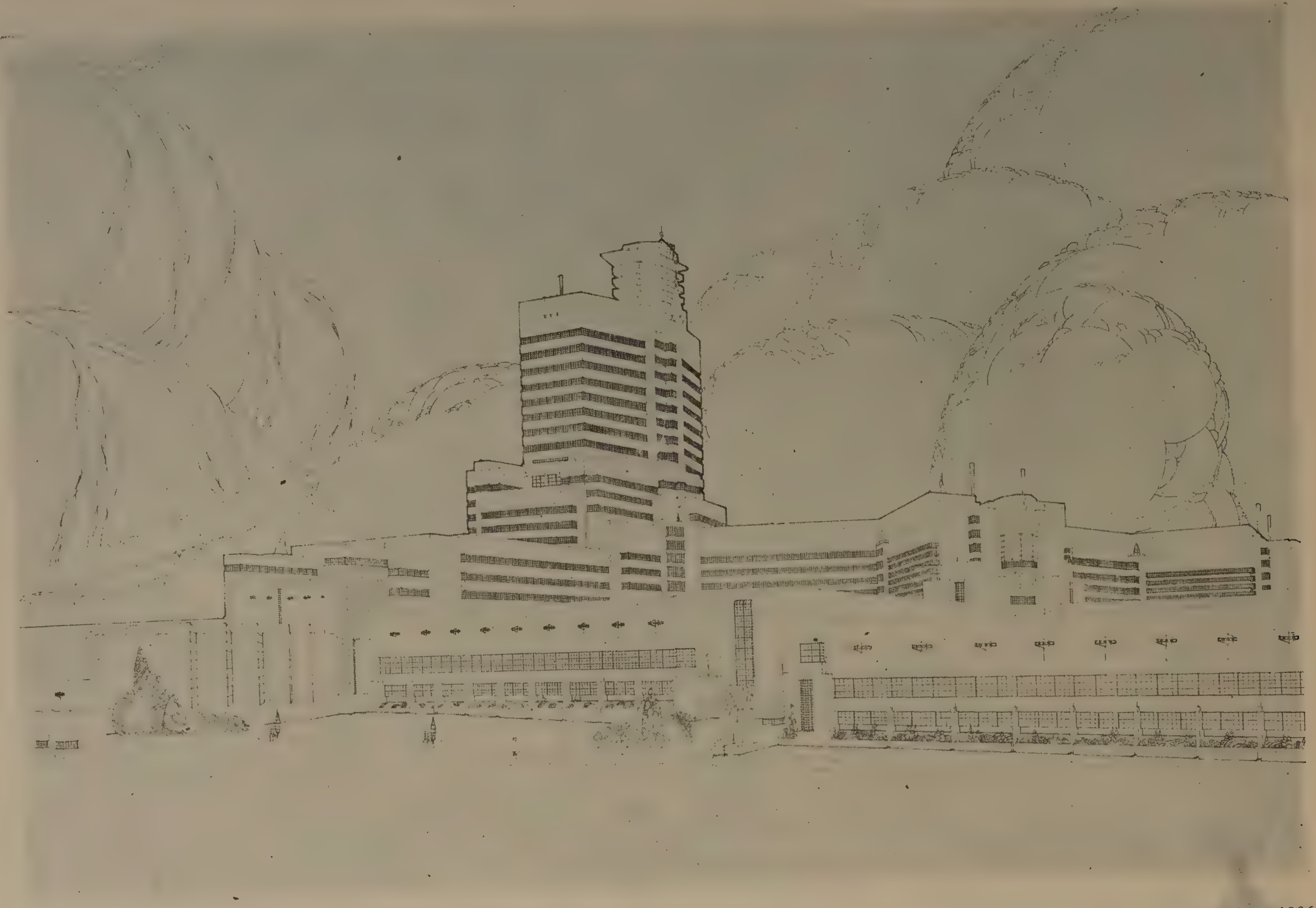
The technique of carving in archaic sculpture was regulated to convey the formal content in idea; at a more mature stage of artistic sensibility, it aimed to transmit those individual and characteristic plastic beauties to which the artist re-acted in living models; at still another period, technique was directed to



PLAN FOR A POLYTECHNIC SCHOOL

Designed by J. Beckening Vinckers

The buildings are grouped around a central court, from which six similar entrances lead to the six groups of buildings, each devoted to a faculty of engineering. These consist of Architecure, Civil Engineering, Mining, Chemical Engineering, Mechanical and Electrical Engineering, and Philosophy.



The Architectural Record

September, 1926

FIG. 1. A POLYTECHNIC SCHOOL
Designed by J. Beckening Vinckers

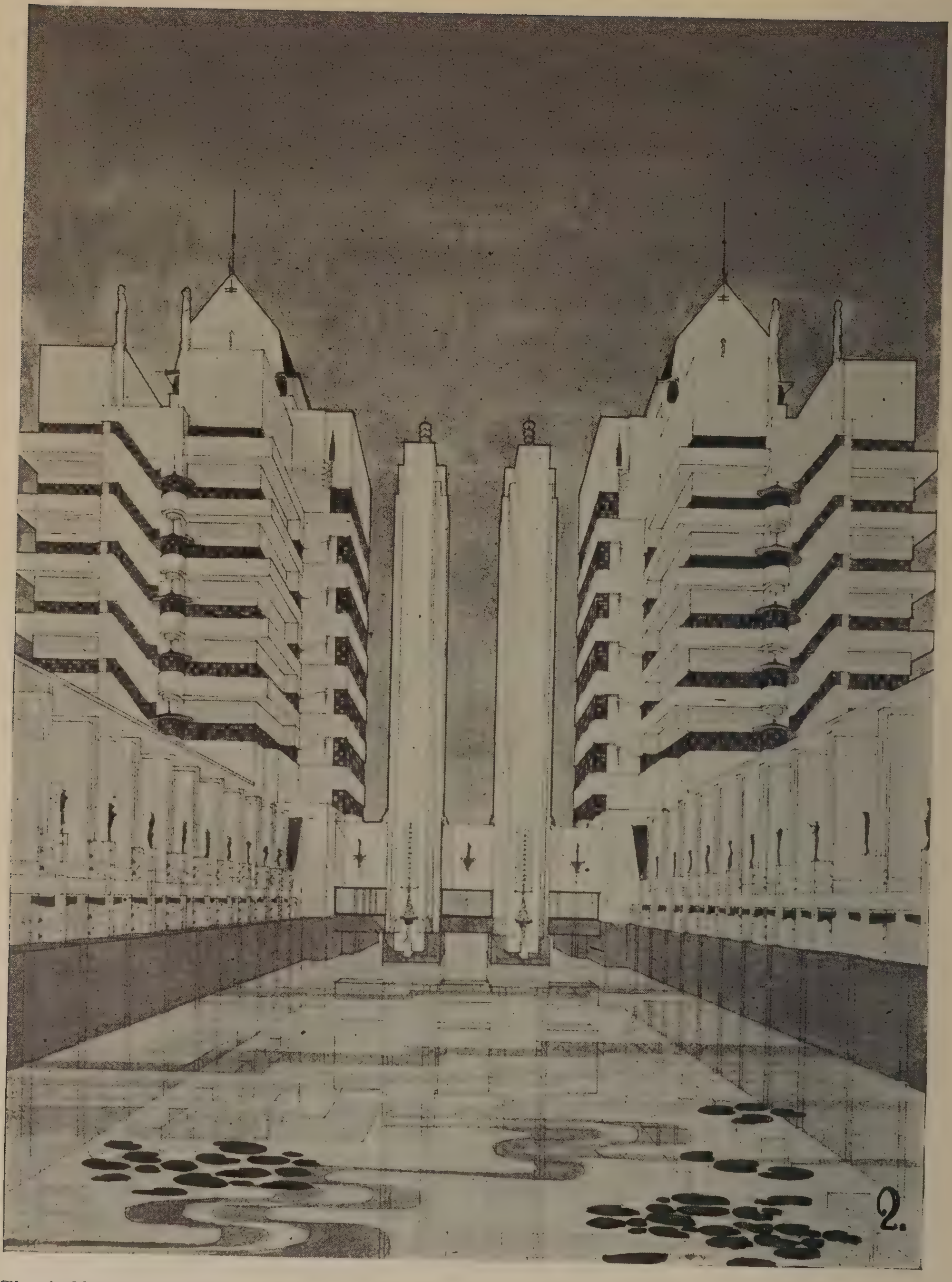


FIG. 2. A POLYTECHNIC SCHOOL
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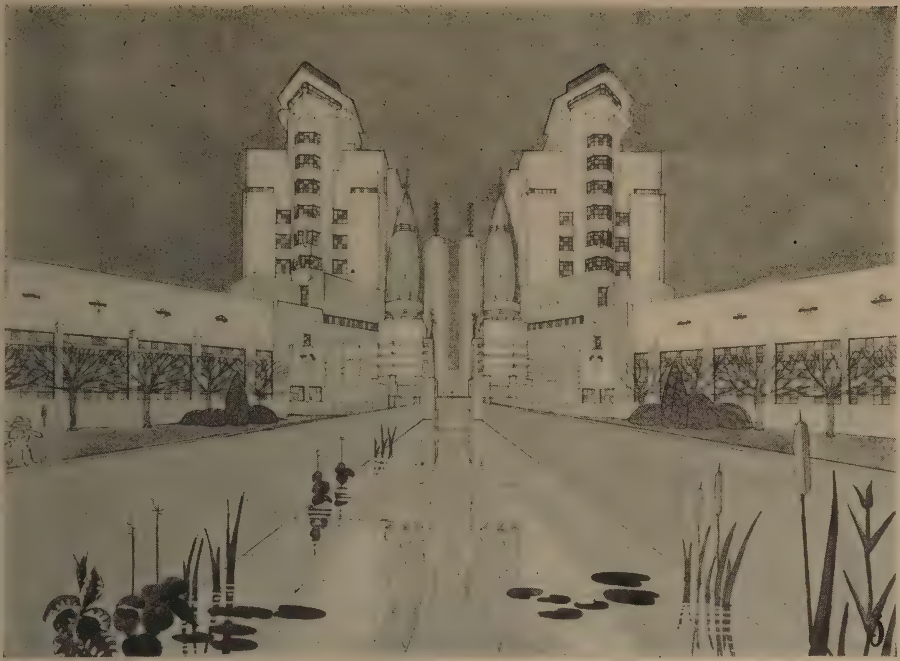


FIG. 3

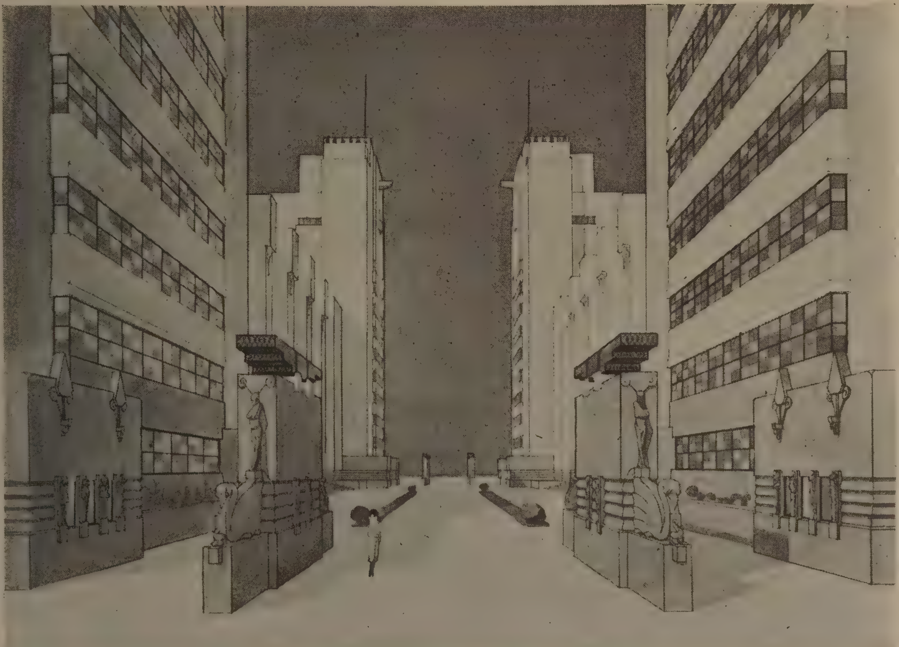


FIG. 4

A POLYTECHNIC SCHOOL

Designed by J. Beckening Vinckers

the externalization of purely aesthetic quantities, such as the crystallization of light upon subleties of plane and form, as in the work of Rodin.

A distinct technique was instituted by the Greek potters to express the simple grace of ideal form, the rhythmic balance of mass within a measure of space in a two-dimension species of presentation. In the Middle Ages another technique was developed to meet the dominant leaning towards the precise delineation of form in connection with the decorative massing of sumptuous color areas. Then, subsequent to the seventeenth century, other techniques have evolved; definitions of contour have given place to conditions of chiaroscuro as a main artistic objective.

The Modernist movement in European architecture has already clearly indicated its ultimate objective, and is employing familiar structural systems with an architectonic significance that is foreign to their traditional import in historic modes. This is wholly in accordance with precedent in stylistic evolution. We therefore find a new technique in the utilization of structual means, novel attributes developing, and a new basis for the aesthetic valuation of elements of effect.

One of the most important and interesting features of the movement is the complete disregard of perfunctory significance habitually attached to specific features; we refer to those conventions in decorative treatment intended to convey imaginary properties, such as strength or elegance. Where we find such symbols operative in effect, they have invariably been borrowed from some structural system in which they actually performed ostensible functions of which such attributes were integral factors. For the moment, we are unable to recall a single instance in original examples of a spontaneous or self-contained stylistic type, in which any important feature in composition justifies its presence by reason of symbolic significance. This could hardly be expected, as in such structural types decoration is in subjective relation to function, whereas in the derivative types of design symbolic significance often takes precedence of the statement of actual function.

The Modernist movement cannot be construed as derivative from whatever angle it is considered, and for that reason we may not expect to find recognition of symbolic significance in any of its structural or decorative features. On the other hand, as normal structural means are employed in execution, we may expect to find features of obvious structural purpose invested with novel decorative properties through the manner in which steel, concrete or other physical media are utilized in design: the evolution of a new structural technique is bound to occur.

The ornamental development of the new manner will undoubtedly progress in an unconventional but strictly logical manner; logic is so essential a part of the argument which precedes precise calculation in their structural design, that it is mainly responsible for the elimination of symbolic significance. If the relation of ornamentation to structural mass be studied in the various historic styles, it will generally be found to develop in two main directions, which are typified in the Classic and the Gothic. In the former, the practical purpose of decoration is to accentuate structural articulation and to beautify features which are not performing vital supporting functions. In the Gothic type, ornament performs a totally different function: the articulation of structural mass does not occupy the dominant position it does in the classic; embellishments of the surface and elaboration of silhouette are the designer's fundamental considerations.

The fascination of apparently monolithic mass in the Modernist objective makes articulation of the Classic order incongruous, and the dominant part which plain surfaces play with their rectangular silhouettes renders this Gothic principle equally unacceptable. In the Modernist manner we detect a tendency to regard a major structural area as the unit of space to be decorated. This will necessitate a revision of ornamental

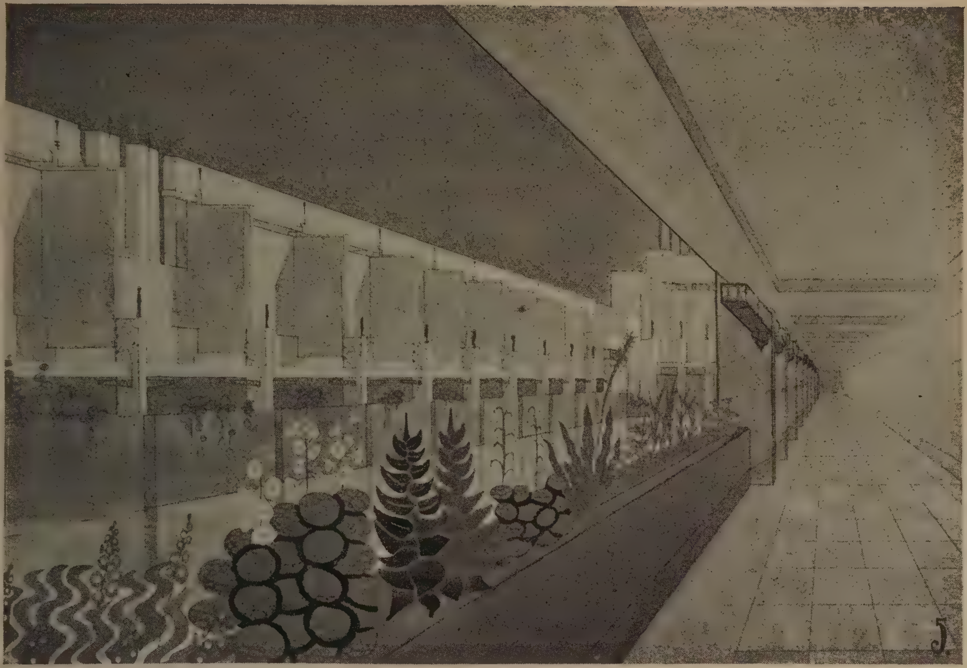


FIG. 5

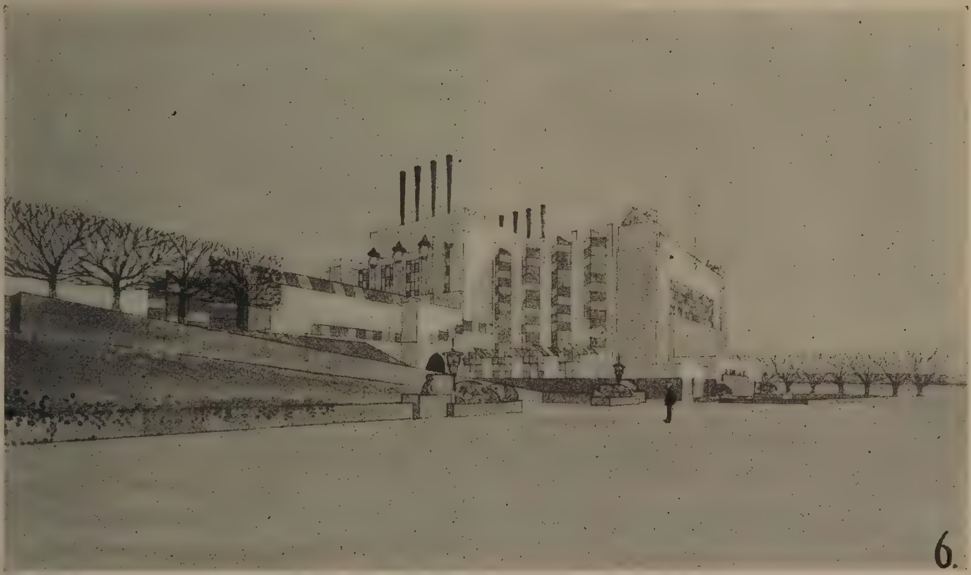


FIG. 6
A POLYTECHNIC SCHOOL
Designed by J. Beckening Vinckers

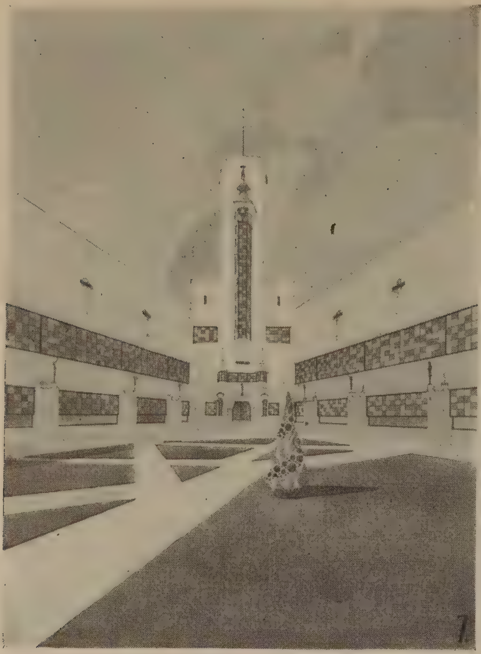


FIG. 7

technique, departing from those conventions previously identified with architectural decoration.

Wth towering masses demanding an ornamental scale adjusted to large areas and long range effectiveness, high relief as the formula for visibility cannot be resorted to, because of its disadvantageous reaction upon the dominant characteristic sought in structural mass. It will be necessary to devise a technique in ornament which has the capacity for a new decorative emphasis and for long range visibilty. This requirement causes us to feel confident that color will be employed. Color will render low relief capable of any exquisite measure of decorative force.

There seems no doubt that polychromy will prove the logical solution of the decorative problem, and the uncompromising premises which must necessarily control the manner of its application will produce a technique without precedent.

In illustration of the foregoing observations and forecasts we reproduce a design for a Polytechnic School by J. Beckening Vinckers, a graduate (1923) of the Delft Institute of Engineering Sciences and Architecture. He started out to study civil engineering, but the strong appeal of the Modernist movement in Holland caused him to change his plan and study architecture under Professor Henri Evers. Graduated at the age of twenty-six, he soon thereafter came to this country and was employed as field engineer by the Western Electric; he is now working in the office of William van Alen. A plan of the Polytechnic School is reproduced on Page 194, accompanied by Mr. Vinckers' description of it.

Each group is centered upon its library; beneath this is the entrance to the inner court, around which lecture rooms, laboratories and drafting rooms are located. The ten-story ring around the inner court would contain a collection of models and other materials for study; these can be visited by the public without disturbing classes. In the main tower are an elevator hall on the ground floor; a monumental hall three stories high, with balconies around each story; and a large ex-

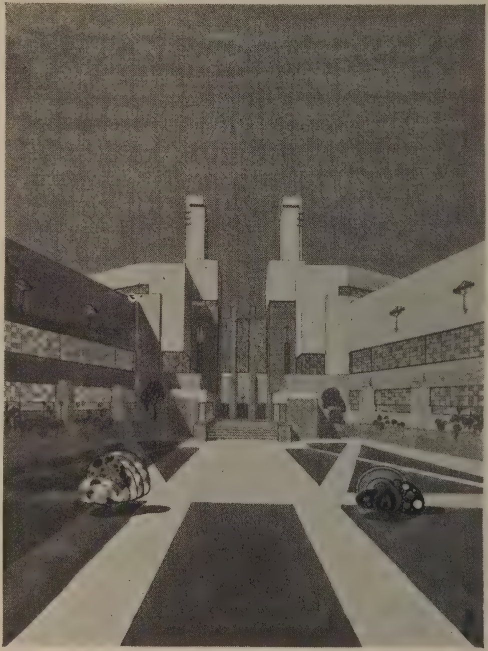


FIG. 8

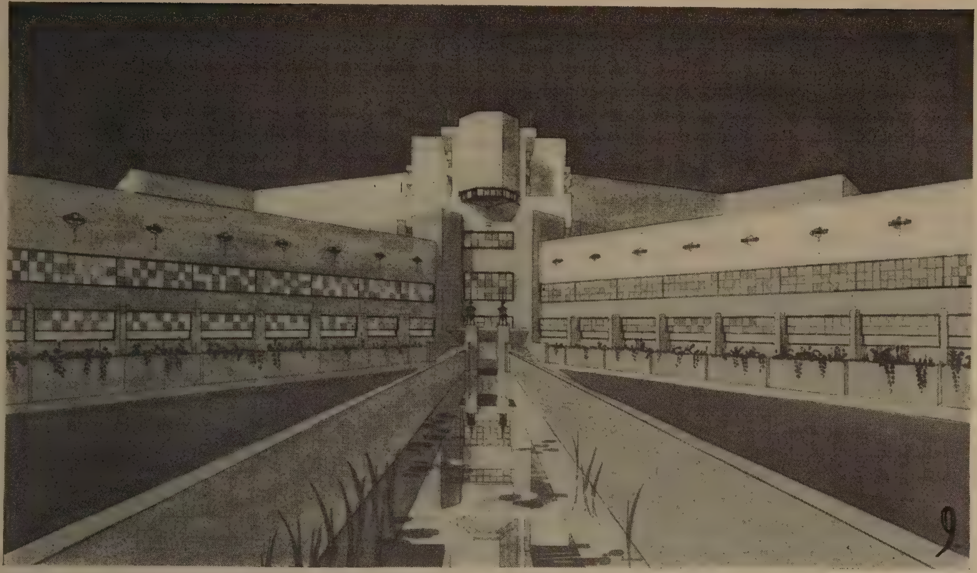


FIG. 9. A POLYTECHNIC SCHOOL
Designed by J. Beckening Vinckers

hibition room which may be passed through in going to the main auditorium. Small auditoriums are located on each floor on either side of the central hall. On the upper floors of this structure are the examination rooms, administrative offices, common rooms, a restaurant and roof-gardens; all elevators run to the roof.

The faculties of Civil Engineering and Mechanical Engineering are on either side of the main axis. As these departments need more room than the four other subjects, their lecture rooms are situated in secondary towers, and their laboratories and workshops on an outer court. On the ends of this axis are two power-houses, one supplying the equipment in the mechanical and electrical departments, and the other light, heat, and power for the institution.

The building was designed to obtain the maximum amount of light in all rooms in view of the amount of technical drafting that would be done. The top story receives direct sunlight regulated by curtains. The buildings have steel frames from the first story, which is a solid base of reinforced concrete. By setting the steel columns back, and cantilevering the girders outwards, the former are eliminated from view.

We consider this design typical in every respect of the fundamental points of view and aspirations in effect of the new generation. In no detail can we discover any concession to blindly accepted precedent, and the conviction is imparted that inspiration has evolved through complete mastery of questions concerning ultimate efficiency as an educational institution. Throughout this interesting scheme we feel that function, whether structural or utilitarian, has been responsible for many of the most novel and interesting features. The manner in which internal convenience is met with passageways on the exterior not only conserves valuable interior space but has a decorative interest which neutralizes the cubical aspect of many concrete structures in this country. The manner in which the windows of the tower and main blocks are treated in long unbroken bands of glass, free of all the usual futile attempts at symbolic support, is one of the most significant features in this composition of the parting of ways.

JUNIOR AND SENIOR HIGH SCHOOLS

By Guy Study

IN ESTIMATING THE DEGREE of interest in general culture of one of our cities we could do no better perhaps than to take the public school system of that city and especially the High School Buildings as our best barometer; for it is in these buildings that the city has recorded unconsciously in brick and stone the degree of its interest in the cultural arts. When we think of the great High School buildings that have been erected within the past few years it seems almost as if our cities had vied with one another to possess a High School that would have no rival. Vast in their extent; comprehensive in all their departments, these buildings appear to possess everything that is possible to put into a building. As great institutions they are inspiring, and one cannot fail to recognize that vision and courage of a high order were needed to bring projects of this magnitude to a successful conclusion. Fortunately, our public schools may look back upon long records of success rather than failure; they are records made possible by the long established precedent of electing men, only the highest type, to serve on our school boards. The result has been that the great majority of our school buildings have been built economically and if we compare their cost with any other type of similar public buildings we shall find that the cost of our schools has been considerably less. It is perhaps safe to say there is no other expenditure of public funds that gives more general satisfaction or pays better returns than that which goes into our schools.

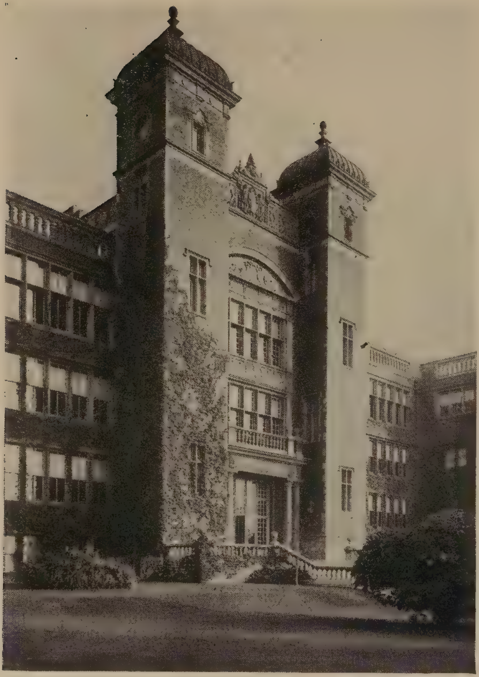
The plan of the High School of today can scarcely be considered a plan of a mere building; it is indeed an extensive layout covering several acres. The great building in the center is surrounded by spacious lawns beautifully planted which frequently serve as experimental or botanical gardens, while to the side and rear are extensive athletic grounds and stadium, features themselves that alone are by no means insignificant.

The two types of Schools known as the Junior and Senior High, while being similar in their requirements and general plan, each hold a distinctly different position in our educational system. For the last twenty years or more, progressive educators have recognized that the twelve years of a student's experience should be broken up into three rather than two divisions. The first period to be spent in the grade school, running through the first six grades; the second period in the Junior High for the seventh, eighth and ninth grades; the third period in the Senior High for the tenth, eleventh and twelfth grades. By the time the child has reached the seventh grade, he is no longer the same being that began in the first grade. A complete change, both physically and mentally, has taken place. His interests and his tastes have changed completely, and in order to meet those new conditions he should be placed in a separate school where his interests, his tastes and his needs may be properly met and provided. But at this age the child is not yet by any means a man; and as he is passing through that tender and sensitive period of adolescence he can only be guided properly if he is trained in a separate and especially adapted school, where he comes into contact with children only of his own age. That this can best be done in a separate school known as a Junior High School has long ago been proven to the satisfaction of all educators. Today the Junior High School is no longer an experiment for, over a long period of actual trial, it has fully justified itself. And to anyone who has had the happy experience of receiving his educational training in both a Junior and Senior High School, it will seem strange to learn that there are still cities where this division has not yet been adopted.

The greatest difference in the plan of the Junior High School from that of the Senior is largely in the science and athletic departments and in the auditorium, these departments being more extensively and more completely worked out in the Senior Building. It is the Senior High School that has quite naturally been the building where the greatest development has taken place. It is the building that has received the greatest thought and effort on the part of the school authorities and it is here that the architects have been given a free hand to incorporate into their plans every detail that the science of modern education has suggested; here too has been put into actual practice every conceivable experiment in the use of building materials and school equipment. If one might take the necessary time, and has the physical endurance to make a complete tour of inspection of one of our modern High Schools which has been built to accommodate three or four thousand students, he will be profoundly impressed and amazed at the completeness of every department; he will be tremendously interested in the elaborate detail of the science laboratories, the home economic sections, the shops with all their modern machinery and withal he will marvel at the conception of the plan and its execution and he will leave the building somewhat dazed and overcome by the extent of the whole.

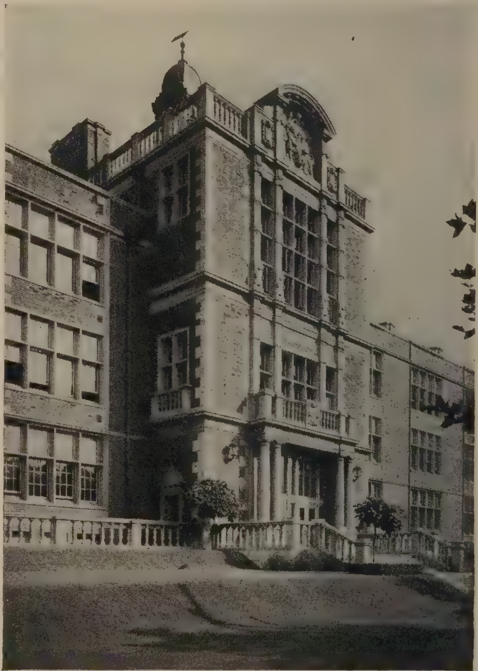
With all the opportunities that the High School Building has enjoyed, and with all the intelligent thought and constructive criticism that our educators have given towards the development of the plan, there still remains considerable question as to what might properly be called the ideal plan for this school. It is perfectly plain that the architect is beset with serious problems and with almost unsurmountable difficulties as he attempts to solve the requirements of the complicated plan and it is probable that there will never be worked out a perfect plan for a building so large and so elaborate in all its component parts as one of our modern High Schools.

The form of the plan depends largely upon the location of the auditorium and the gymnasiums. In general, all of these buildings may be separated into two groups; one with the auditorium and gymnasiums grouped together—the other with the gymnasiums and auditorium separated and isolated from the rest of the departments. We might consider that there is a third group which is a sort of combination of the first two. In this plan the auditorium and gymnasium are both separated but are still an integral part of the building and not located in separate wings. There are obvious advantages and disadvantages to either scheme and neither can be considered as an entirely satisfactory solution. There are abundant reasons for placing the auditorium and the gymnasiums in separate and isolated positions in the plan, and if one might elminate all consideration of economy and practical school administration, we would probably say that these larger units should always be separated. The many varied uses that the auditorium is put to, especially when its full capacity is to be utilized, render this unit more serviceable when separated or detached from the other departments. Gymnasium work can best be conducted when separated and isolated as far as possible from the academic departments, so it is plain that the placing of the auditorium and gymnasiums in the center of the plan is unquestionably open to criticism. With the auditorium and gymnasiums located in different wings, the entire aspect of the general plan is changed; the plan becomes more of a group plan, with class rooms and science laboratories forming a central mass while the auditorium and gymnasiums are located in extended wings. Such a layout possesses many obvious advantages but it loses in a like number of practical details. Such a plan is more expensive to build and calls for far more acreage; in efficiency and convenience of school administration the plan is also objectionable, so that upon summing up all the practical considerations that are involved, it is debatable if the group plan will ever be widely adopted. Mr. Ittner has long held



YEATMAN HIGH SCHOOL, ST. LOUIS, MO.
Wm. B. Ittner, Architect

to the theory that taking everything into consideration the best place for the auditorium and gymnasiums is in the center of the plan. General practicability, economy and efficiency in school administration are the principles underlying Mr. Ittner's theory of planning. And so general has his judgment been accepted as authoritative that the Ittner plan has become an accepted standard throughout the country. That Mr. Ittner recognizes many objections to placing the auditorium and gymnasiums in the center of the plan is shown by his use of numerous devices cleverly conceived and whose use is intended to overcome, if possible, those objections. The heavy sliding or folding partition, which may be let down, separating the auditorium from the gymnasium stage, is not always a complete success in stopping the noise from the gymnasium, and where such a partition is used, it should be of such a type as specified by an experienced architect. The scientific and intelligent treatment of the gymnasium walls and ceiling with acoustical felt will also be found valuable. Where such acoustical treatment has been installed as with a properly designed curtain, there should be little or no difficulty in cutting out the noise. With the intense program for health now almost universal in our High Schools and with the development of the indoor games, there has come about a demand for a large number of seats for spectators. The combined gymnasium and auditorium seems to be the only practical solution for serving the public on such occasions. In 1908 at Gary, Indiana, Mr. Ittner first introduced the combined gymnasium and auditorium and so successful was this scheme, that it has been followed very generally throughout the country by many architects. Elaborating upon his original idea at Muskegon, Michigan, Mr. Ittner has placed two gymnasiums at the back of the auditorium which may be opened up and made into one and here bleachers have been arranged so as to be dropped down between the trusses to the floor level,



SOLDAN HIGH SCHOOL, ST. LOUIS, MO.
Wm. B. Ittner, Architect

thus giving a large additional number of seats for spectators.

Careful study of a number of High Schools designed by different architects will reveal that their designers have been struggling with the economy of space. There is an evident desire to make the larger rooms such as the Study Hall, Auditorium and Gymnasium serve more than one purpose; yet in all these attempts there is scarcely one that can be called a satisfactory solution, and it appears that the adoption of any one of these schemes has been a question of economy rather than of desirability.

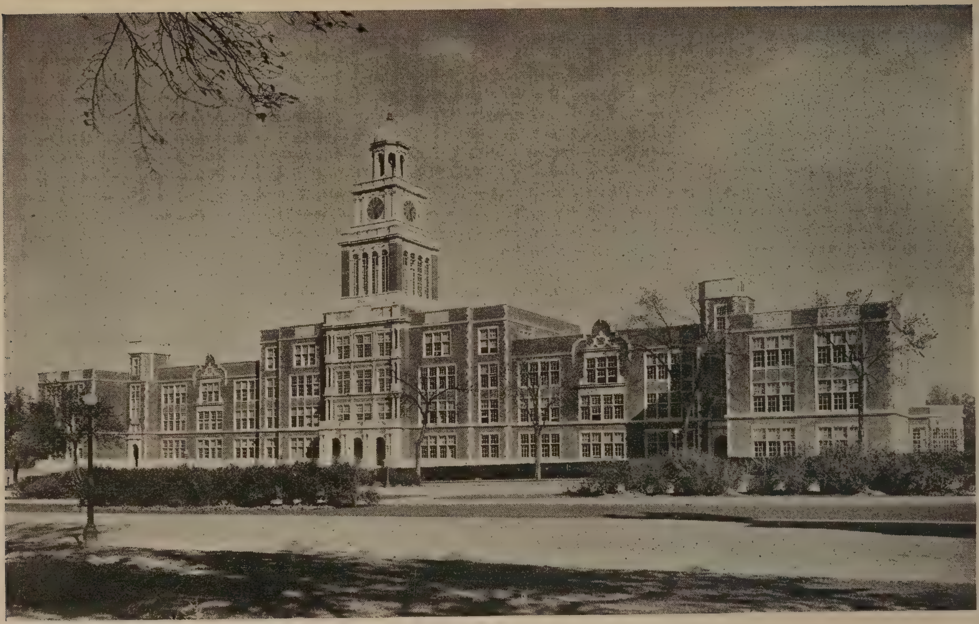
There is a well developed movement, of which Mr. Ittner might be said to be the leader, to plan the school so that all of the building will be in continual use. From an economical point of view such usage would be ideal, and if such an ideal is to be attained the building must be planned by an architect who is thoroughly familiar with every detail of the correlated departments and with the most modern school administration, and then only the most skillful marshalling of the classes by the principal will accomplish this result.

The principle of economical planning should not, however, cause the architect to lose sight of the necessary factor of elasticity that every school must have. Consideration must be given for a possible change in the tastes of the students in their choice of studies. There is obvious danger of over-economy in planning. Before the architect can undertake to lay out his first sketches, the school authorities should supply him with adequate data relative to all the requirements. No two schools are exactly alike. There are always some special features in the plan of any school that has made it a distinct problem of its own. All this special information must be given to the architect by the school superintendent. Where there is intelligent and close cooperation between architect and superintendent, the allotment of space and correlation of departments can be figured out to a nicety. There is no excuse for instance, in such an error in a High School designed for two thousand students of supplying classroom space for but one thousand students, while there was laboratory space for fifteen hundred students; and yet we frequently find examples of similar planning in some of our most modern High Schools.

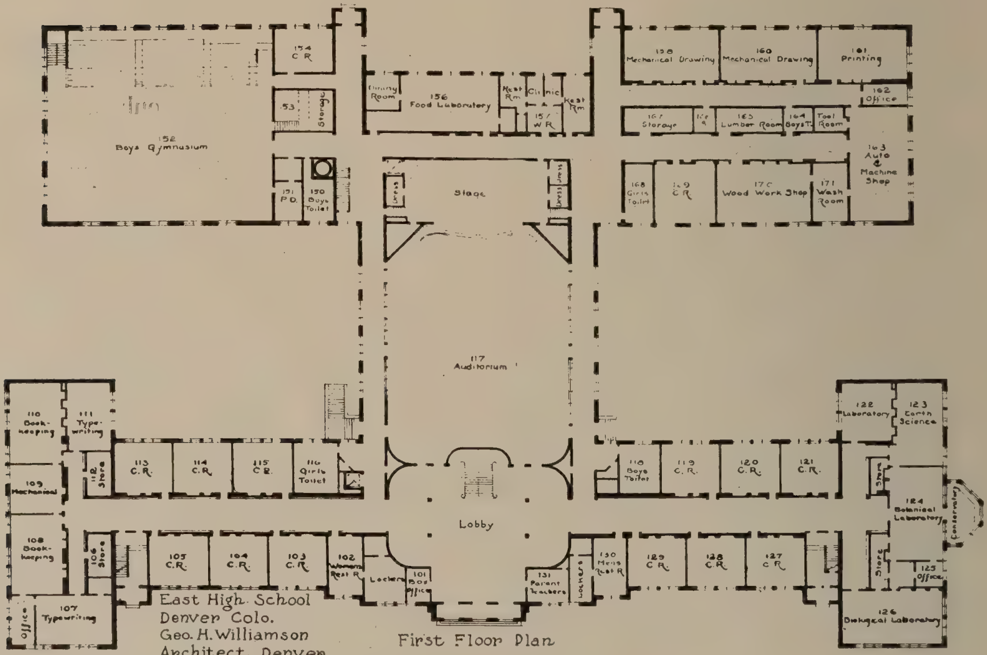
There is probably no other detail in the plan of a High School that has caused more annoyance and affected the general plan more as a whole than the question of the location of the lockers. Their location in the basement, once thought satisfactory, is today frowned upon by most superintendents, while their location in the corridors is but little more preferable. Here again, Mr. Ittner has come to the rescue with a simple and happy solution by providing alcoves in the corridors for these lockers.

Many different materials have been tried for the walls of the corridors, none of which has been totally free from objections. The most practical, however, is probably a glazed colored brick. It is, however, extremely difficult to obtain a satisfactory interior wall of brick and only a skillful use of well proportioned panels framed in the brick work with their centers filled with decorative designs such as tiles or plaster casts, will overcome the unsympathetic coldness of the brick, and even then, only a skillful artistic hand and a refined color scheme will accomplish the desired result.

Of the large number of high schools that have been built in the last few years, there are few that may claim more of our interest than the East High School in Denver, Colorado, by Mr. Williamson. (Pages 206-7.) While the façade of this building may be open to the criticism of being so long that it loses an indefinite something that a smaller building might possess, it has, nevertheless, a distinct claim upon our interest, due to the beauty of its architecture. The larger architectural motives of the façade have given dignity and a play of contrast to the composition, as a whole. Except for the lower portion of the central tower, as it rises above the main roof line, which appears to us unfortunately weak, the building is a strong piece of design. The materials have been well selected and are most



EAST HIGH SCHOOL, DENVER, COLORADO
George H. Williamson, Architect

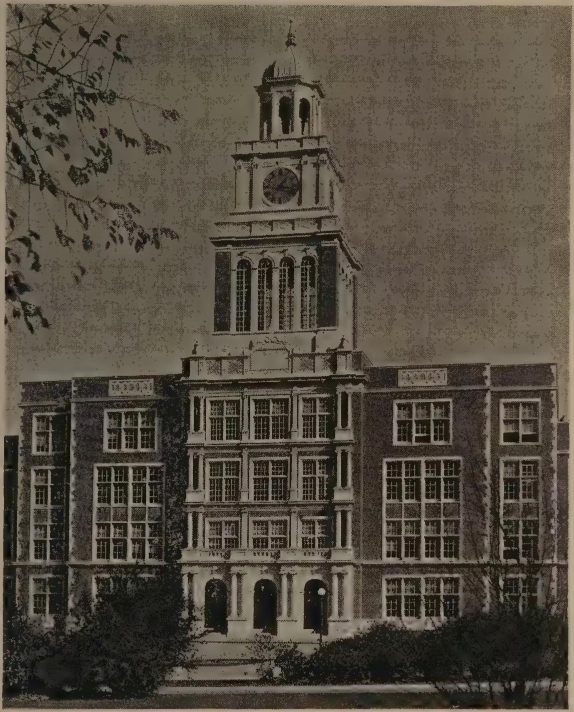


East High School
Denver Colo.
Geo. H. Williamson
Architect, Denver

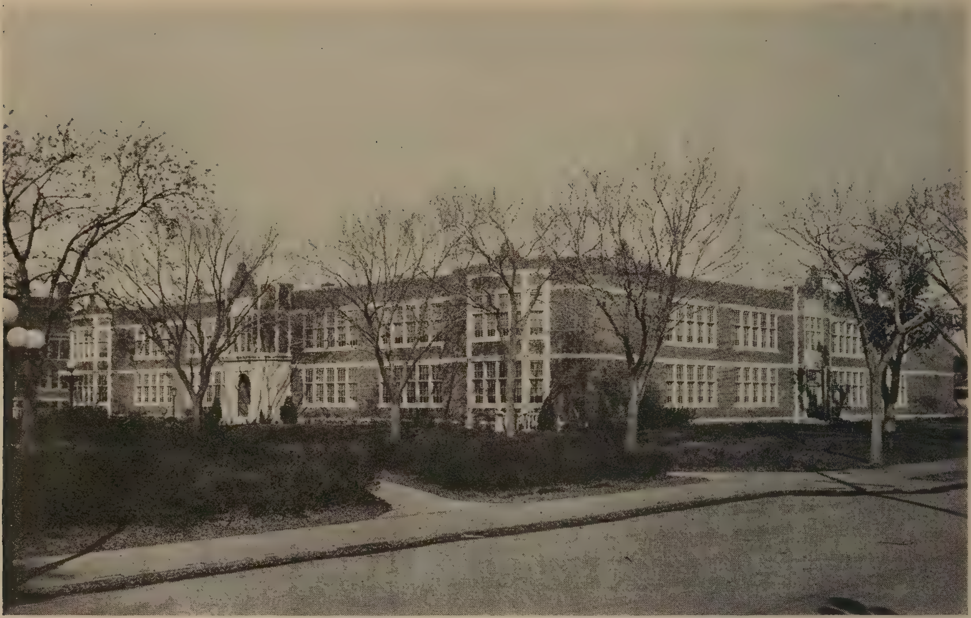
First Floor Plan

pleasing. One cannot fail to recognize here the great power and effect of good architectural designs. That aesthetic character that we hold so essential for our schools is here obtained in a high degree. We recall no better High School than this that has been built within the past decade. The plan of this building is H shaped, with the auditorium in the center. It is here isolated and separated from the rest of the building. The two gymnasiums have also been separated and are located so that the gymnasium work does not interrupt that of the class rooms. In this plan the lunch room has been located on the third floor, an ideal location when once reached, but a location that seems somewhat questionable from a standpoint of accessibility. This lunch room is said to serve admirably purely social gatherings and especially for the student dances. This plan also provides for a private dining room for the teaching staff—a highly desirable feature for the modern High School. From a standpoint of light and air this H shaped plan is superior to most other forms. The H shaped plan is, however, obviously more costly in the building itself, and calls for much greater acreage.

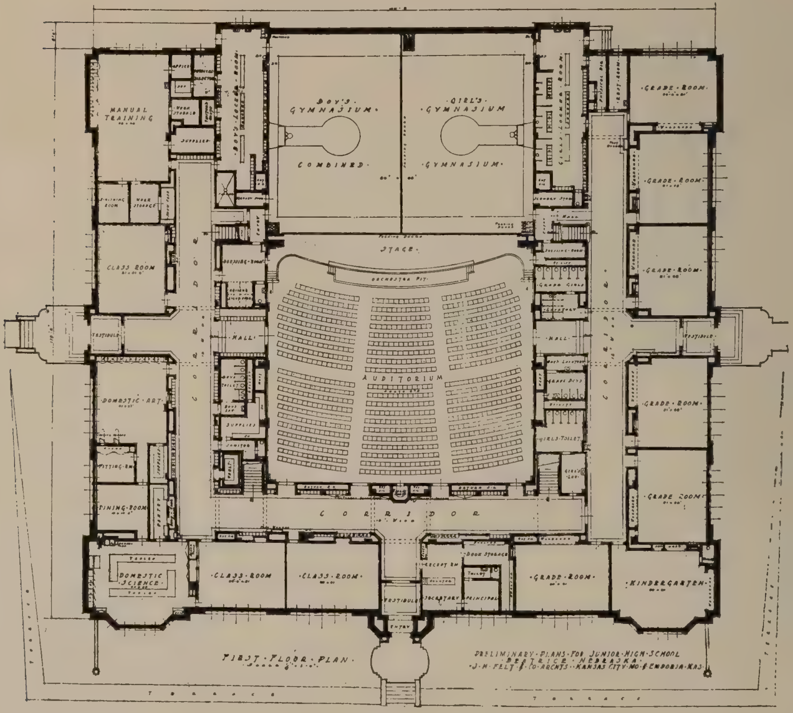
While the development of the modern High School has been going on for more than a quarter of a century, it is still in something of an experimental stage; not so much in the development of the details of the building but more in the general plan. It has been said that no two educators ever agree and so long as this condition exists, the problems of our schools will remain unsolved. Today it would seem that the greatest danger lies in the planning of too large a school. When four thousand pupils have been brought together into one building there can be no question but that the limit has been reached. Even three thousand students is usually considered too large a number to bring together. St. Louis has recently completed two modern high schools, each of which are to accommodate something over three thousand five hundred students. If we are to have schools as large as these, the Roosevelt High may be looked upon as a very admirable building. (Page 212.) As one approaches it, its immense size and the extent of the main façade are somewhat overpowering. Unfortunately here, the effect upon us is not produced by the charm and beauty of its scholastic or aesthetic character, but rather by its immense size. While the building has fine architectural proportions and reasonably good details, to the observer these all seem to lose their



Tower Entrance
EAST HIGH SCHOOL, DENVER, COLORADO
George H. Williamson, Architect

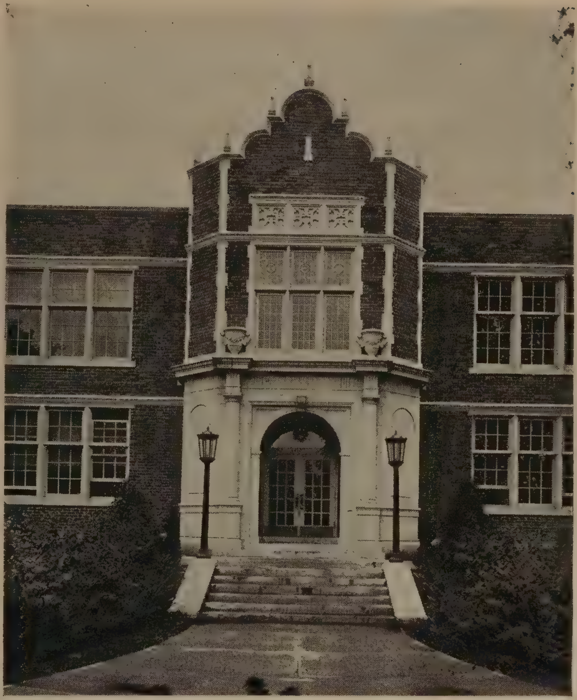


JUNIOR HIGH SCHOOL, BEATRICE, NEBRASKA
J. H. Felt & Co., Architects

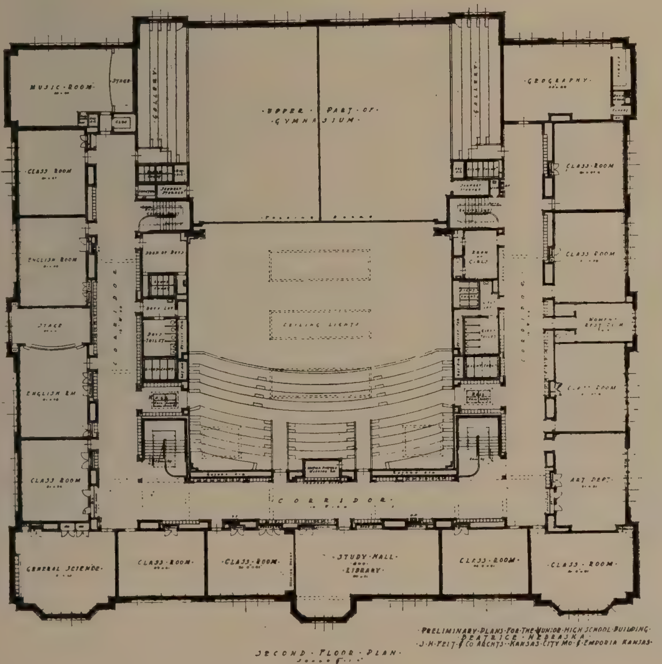


effect to the overpowering mass.

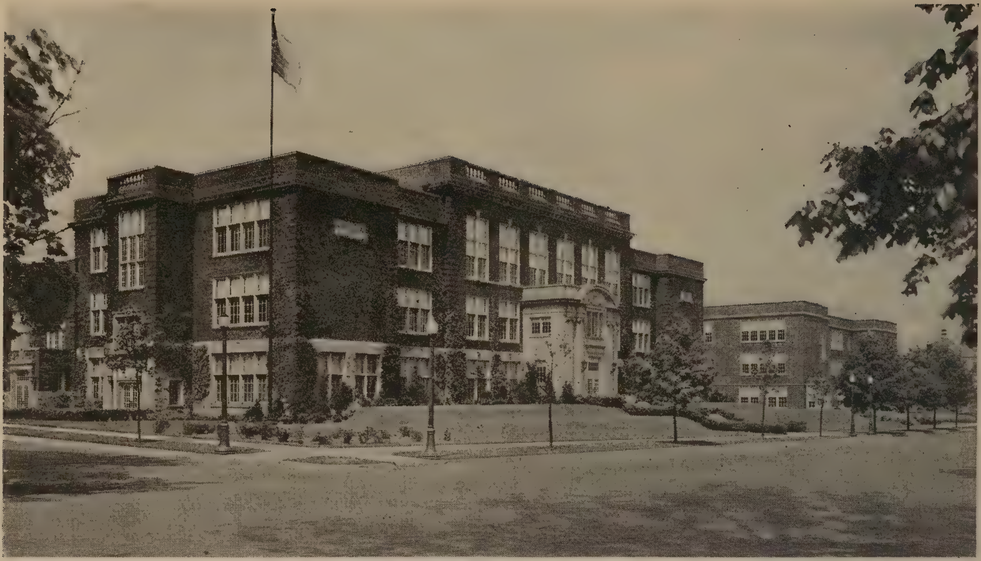
It is probable that fifteen hundred pupils constitute more nearly the ideal school. The unwieldly administration of the larger schools renders them uneconomical; and their great size renders them impractical from almost every point of view. But few principals can be found that can impress their personality upon a school of four thousand pupils. The High School of fifteen hundred pupils can possess character and individuality but when this number is doubled, the whole becomes a great mechanical institution void of a soul, into which naturally creeps many of the frailties and errors that follow in the steps of all the larger gatherings of the human race. From a purely architectural standpoint, the façade of either the Yeatman or the Soldan High Schools (Page 204), built two decades ago in St. Louis, by Wm. B. Ittner still represent what we may consider to be the ideal.

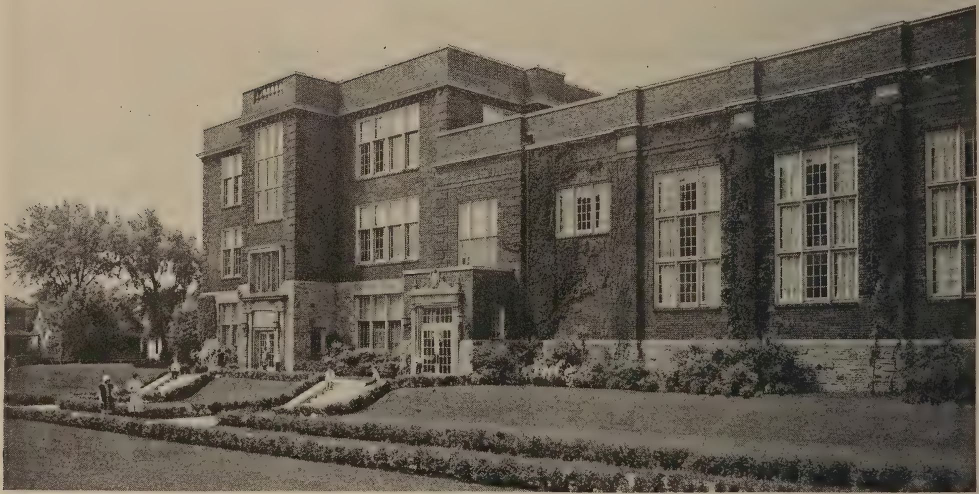


Entrance Detail
JUNIOR HIGH SCHOOL, BEATRICE, NEBRASKA
J. H. Felt & Co., Architects

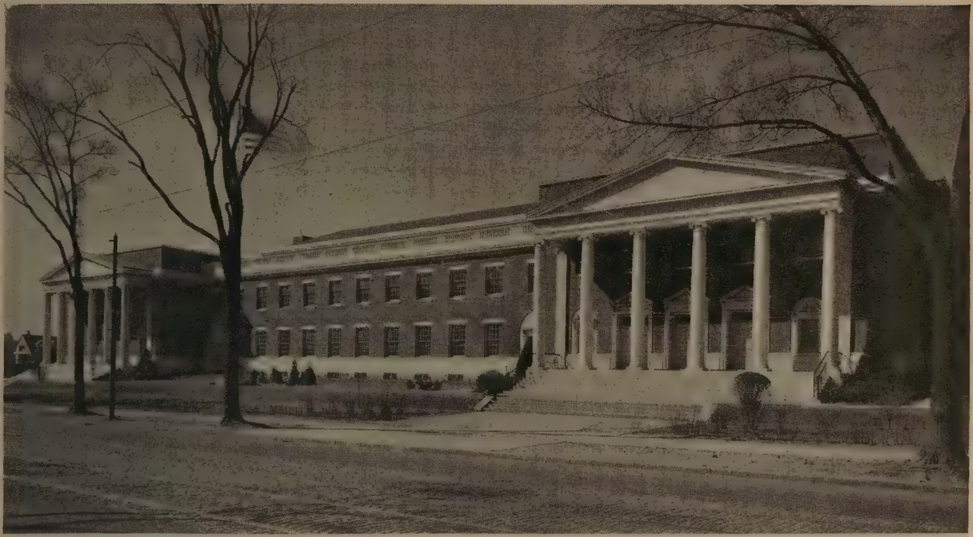


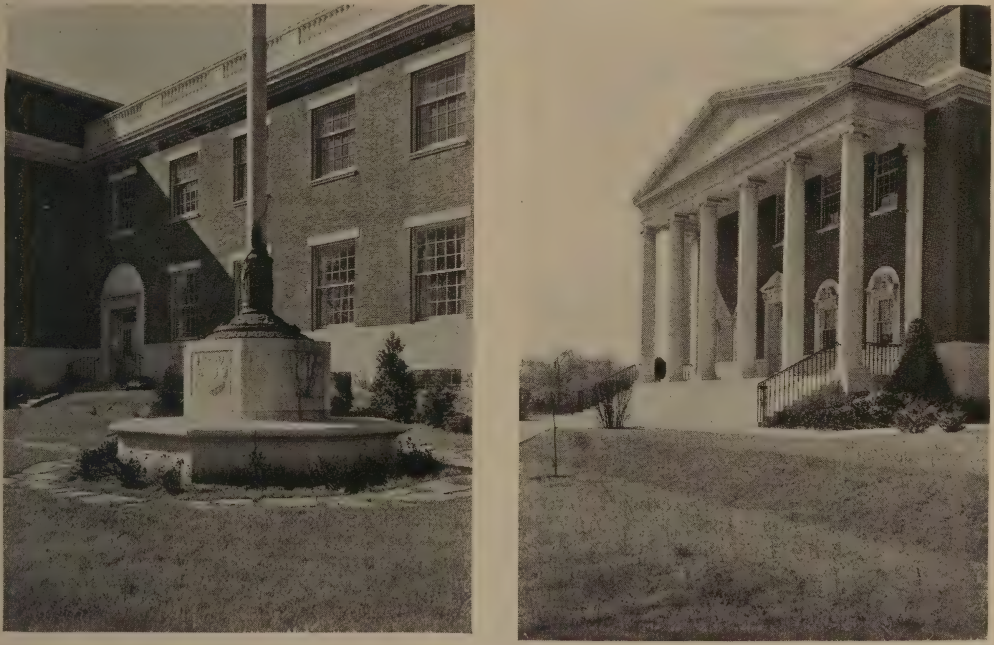
The group of buildings that Mr. Ittner built in Greenfield, Ohio (Page 210), possesses every quality that we may expect in our schools. The group is decidedly scholastic, it is picturesque, it is dignified. Based upon the classic, the architecture is more what we would call scholastic rather than anything else and it is a frank and honest expression of all that comes into play with our modern scholastic life. One cannot pass over this design without noting the beauty of the whole, the richness of the brickwork whose velvet texture has been further softened by the English ivy which covers the walls.



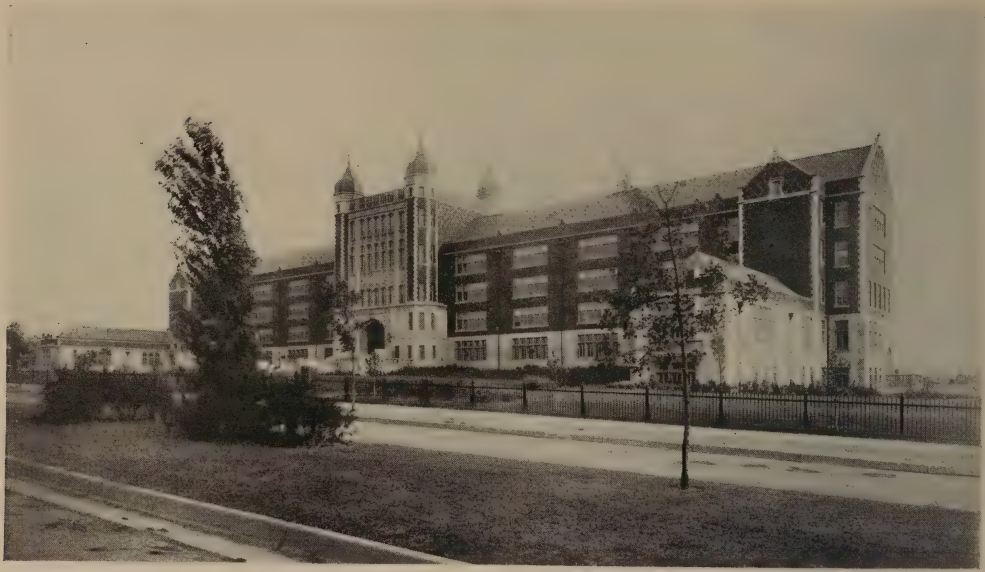


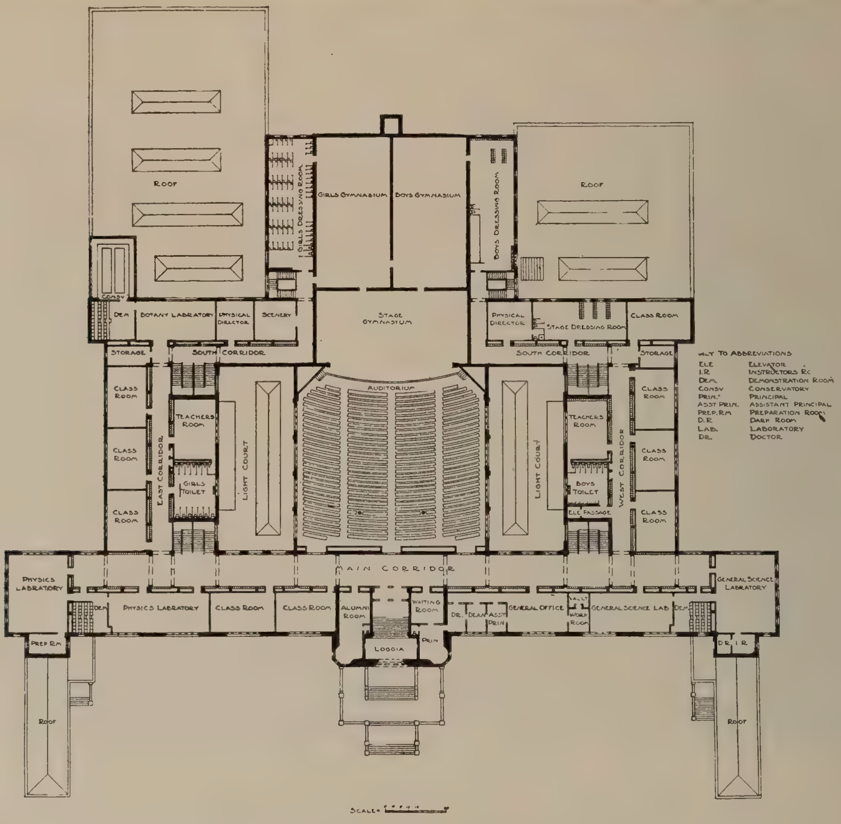
TWO VIEWS OF THE HIGH SCHOOL, GREENFIELD, OHIO
Wm. B. Ittner, Architect



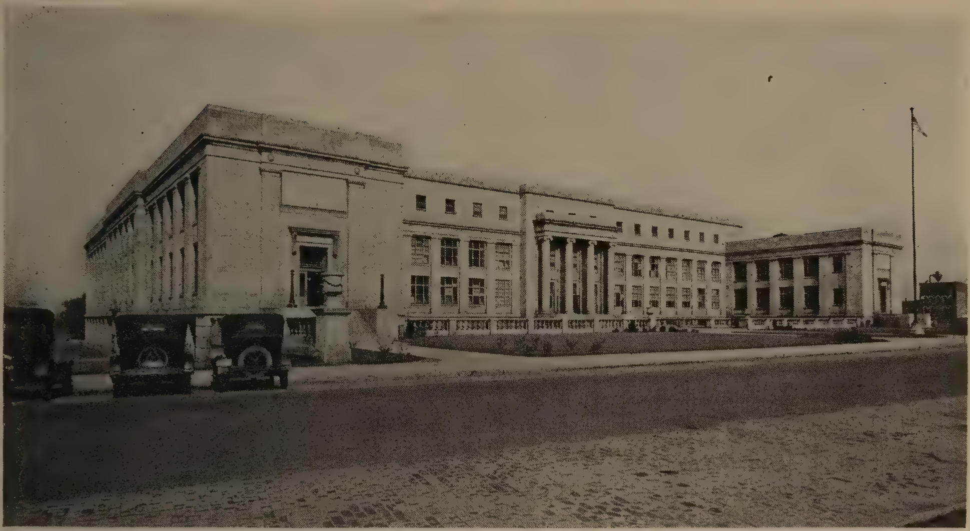


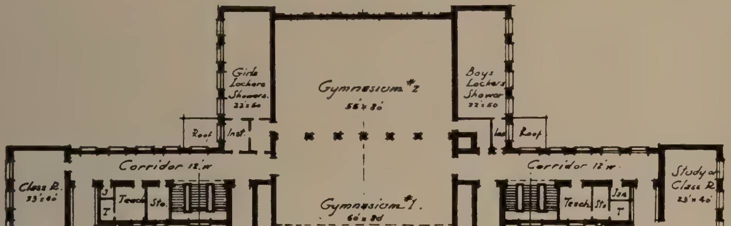
GENERAL VIEW AND DETAILS, THE HIGH SCHOOL, ORANGE, N. J.
Ernest Sibley, Architect



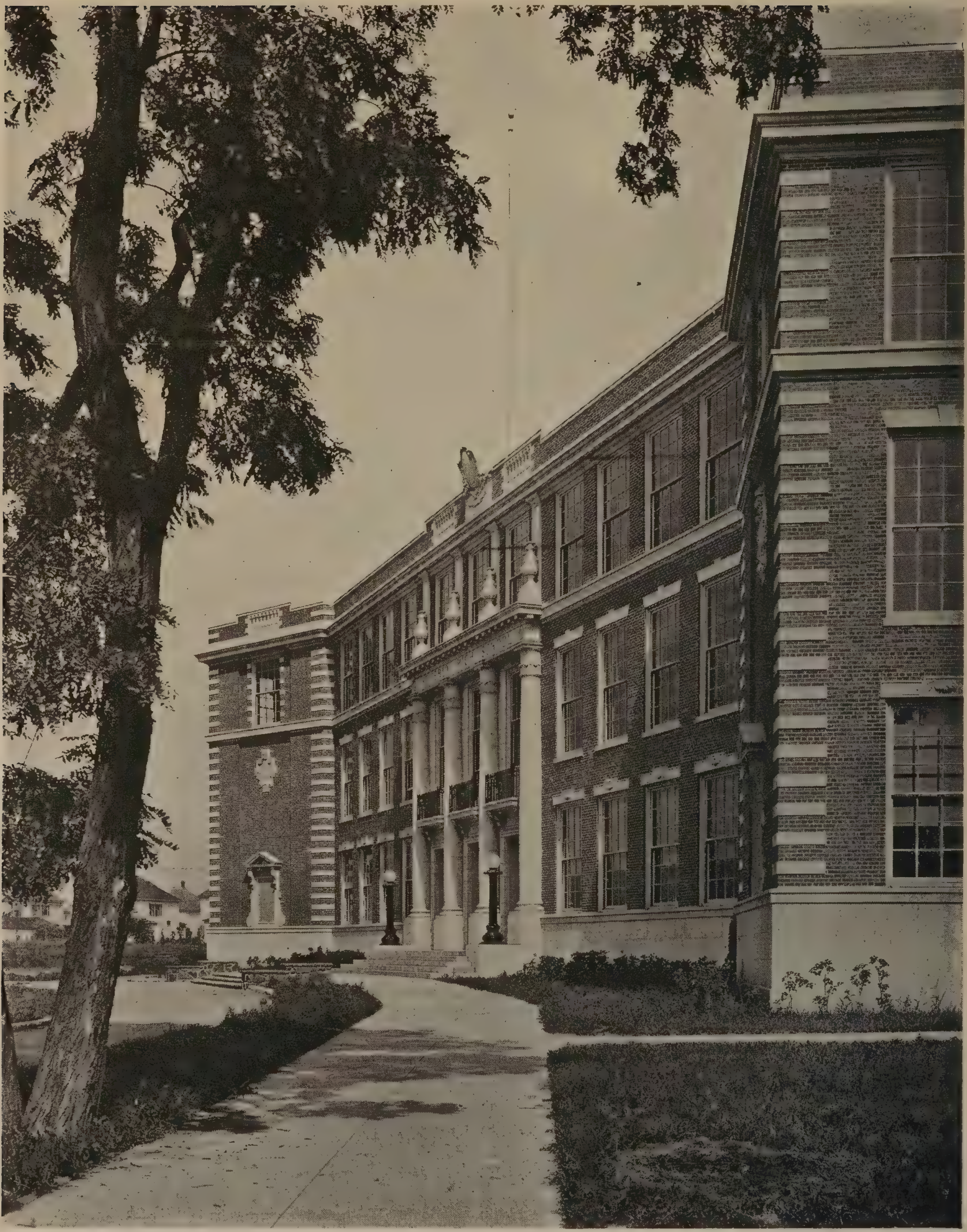


ROOSEVELT HIGH SCHOOL, ST. LOUIS, MO.
Wm. B. Ittner, Architect

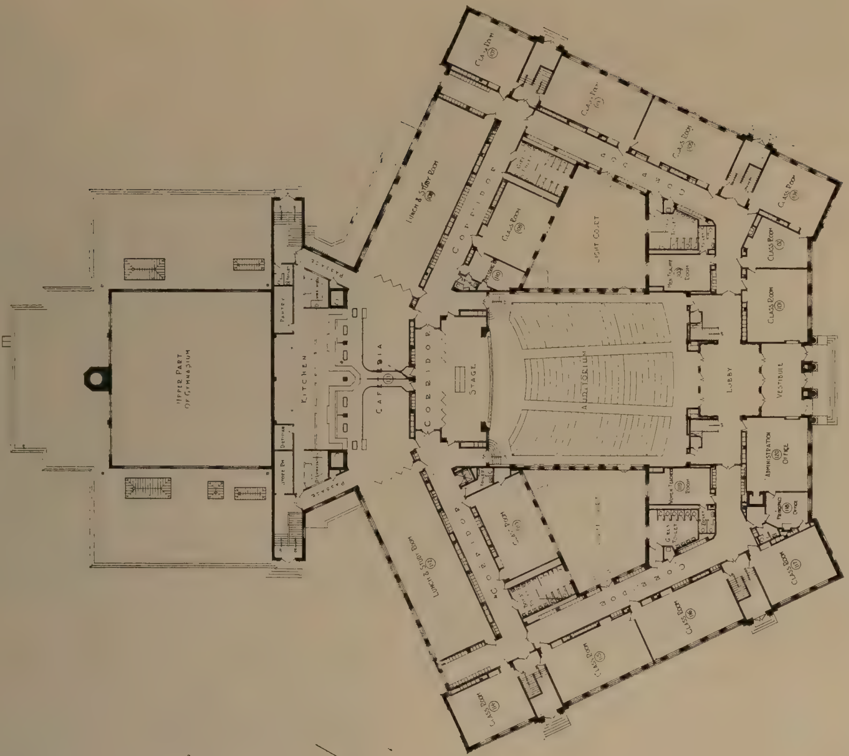


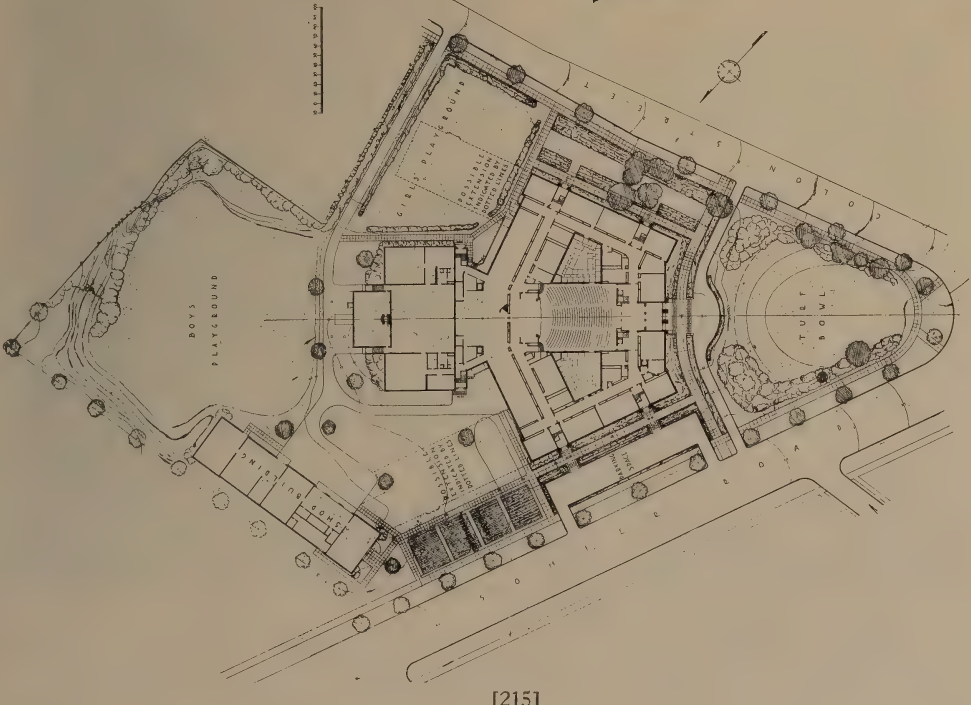


THE CENTRAL HIGH SCHOOL, COLUMBUS, OHIO
Wm. B. Ittner, Architect

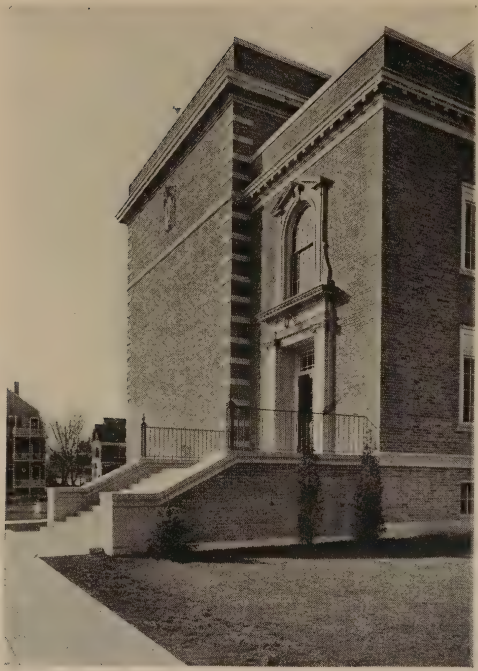


HIGH SCHOOL, BEVERLY, MASS.
Adden & Parker, Architects





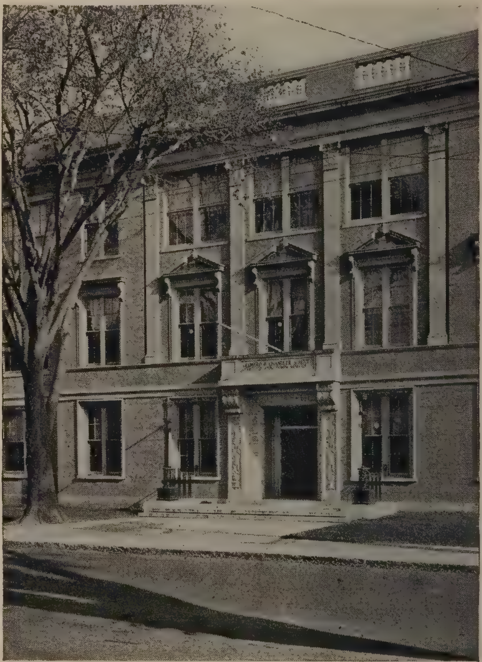
HIGH SCHOOL, BEVERLY, MASS.
Adden & Parker, Architects



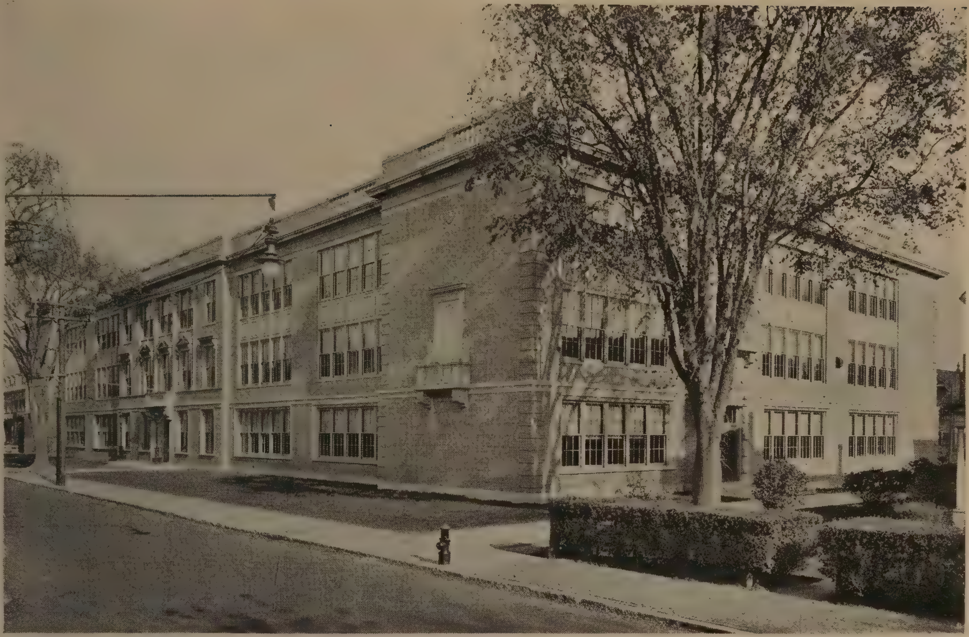
Entrance Detail
HIGH SCHOOL, NORWOOD, MASS.
Ritchie, Parsons & Taylor, Architects

There is still some dissention amongst the architects as to the proper design of our schools. Many of the eastern architects express a belief that the schools should fit more harmoniously into their general surroundings. In the East we find many buildings well designed in the Colonial Style where this principle has been followed with considerable success and from a purely architectural standpoint these schools are most pleasing; yet they seem to be somewhat lacking in scholastic character. The Orange High School in Orange, New Jersey, (Page 211) by Mr. Sibley is unquestionably a splendid example of architectural design. It is good pure Colonial architecture, but in character it is more collegiate than scholastic. The materials and motives are all admirably handled, while the auditorium and library are both beautifully designed. The Norwood High School or the Somerville High School (Pages 216, 217) by Ritchie, Parsons & Taylor are also well designed buildings and may be looked upon as good examples of architecture. The Somerville High School possibly is open to the criticism of being somewhat overstudied to the extent of the detail becoming hard and slightly mechanical. The Beatrice, Nebraska, High School (Pages 208, 209), by J. H. Felt, is a fine example of how the Tudor style lends itself to a modern scholastic design.

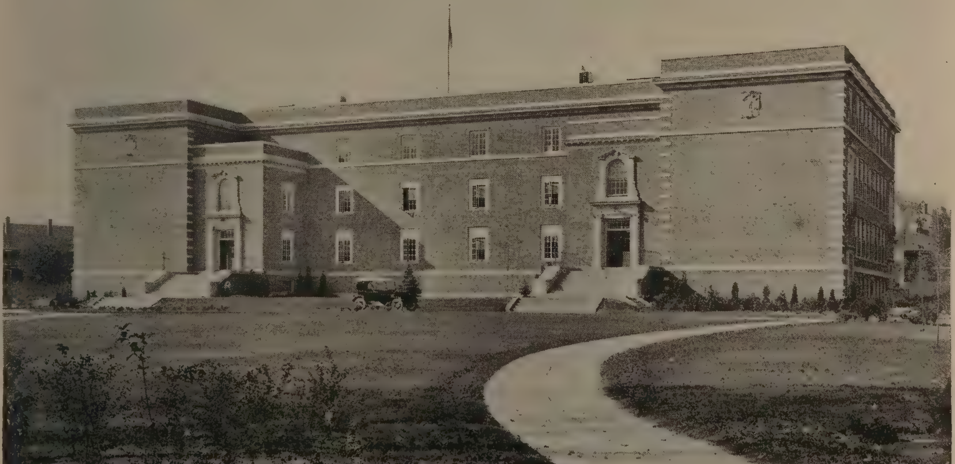
While the architects may never decide upon the proper form for their plans, nor the pedagogues arrive at the ideal size of the school, it is incumbent upon all that are instrumental in the building of our schools to see that they are not only well built but properly designed from an architectural point of view. Today there can be no excuse for anything but a beautiful building whose aesthetic influence will leave a lasting effect not only upon the pupils but upon the community at large. That this can best be accomplished by following the simple and eternal principles underlying all art seems evident. We can hope for



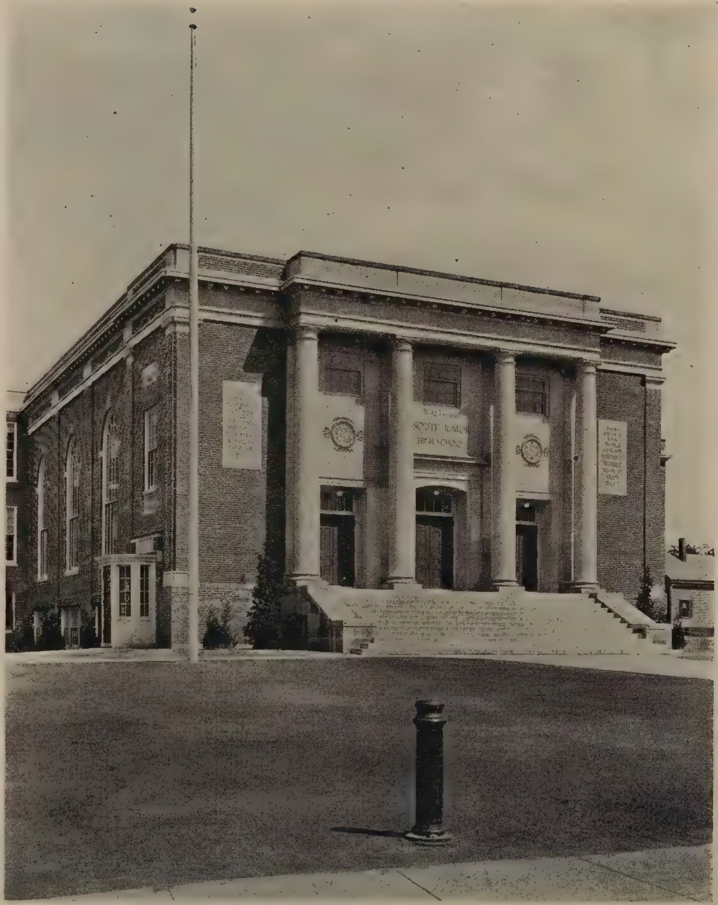
Main Entrance
JUNIOR HIGH SCHOOL, SOMERVILLE, MASS.
Ritchie, Parsons & Taylor, Architects

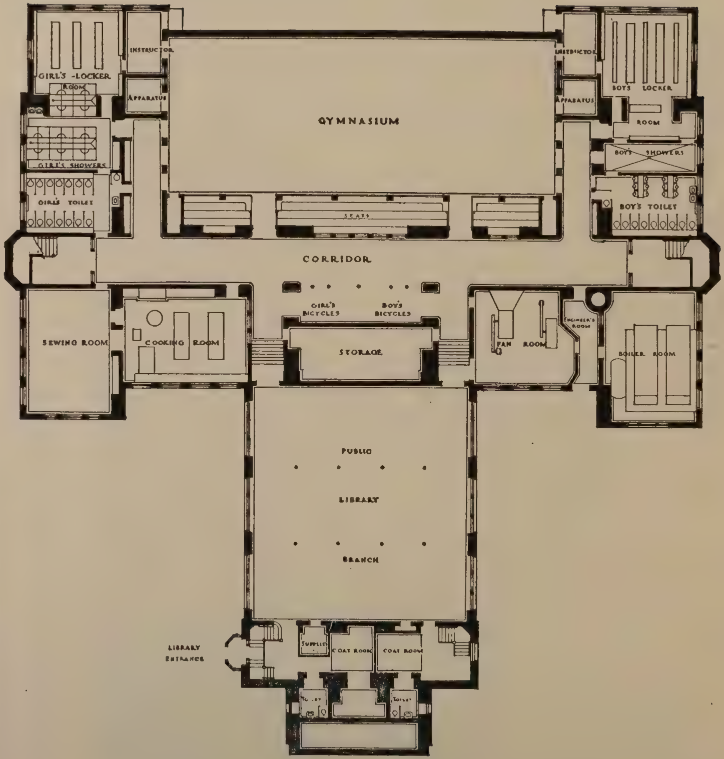


JUNIOR HIGH SCHOOL, SOMERVILLE, MASS.
Ritchie, Parsons & Taylor, Architects



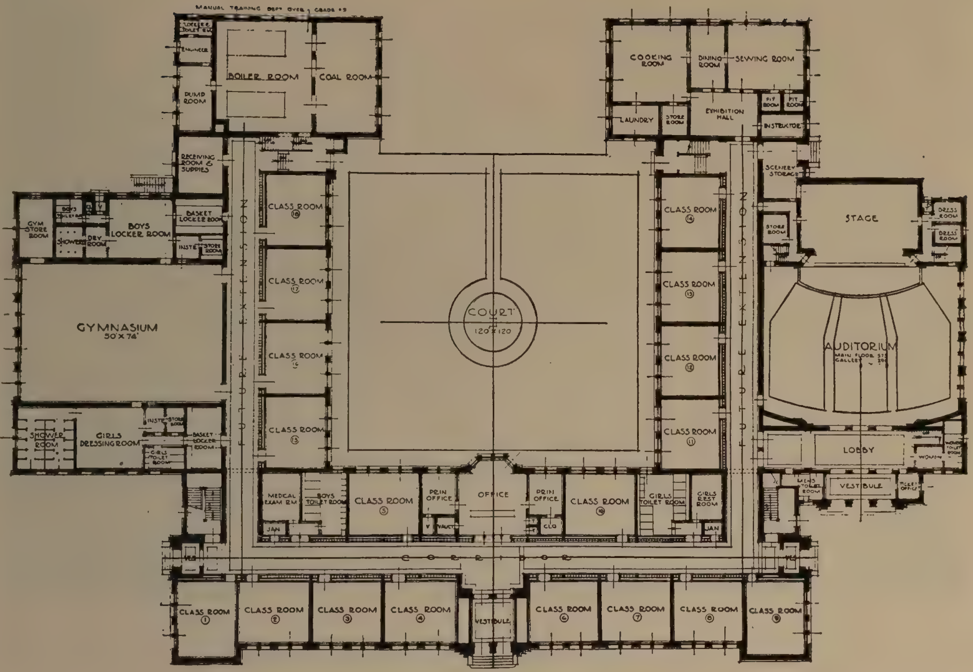
THE HIGH SCHOOL, NORWOOD, MASS.
Ritchie, Parsons & Taylor, Architects





Ground Floor Plan

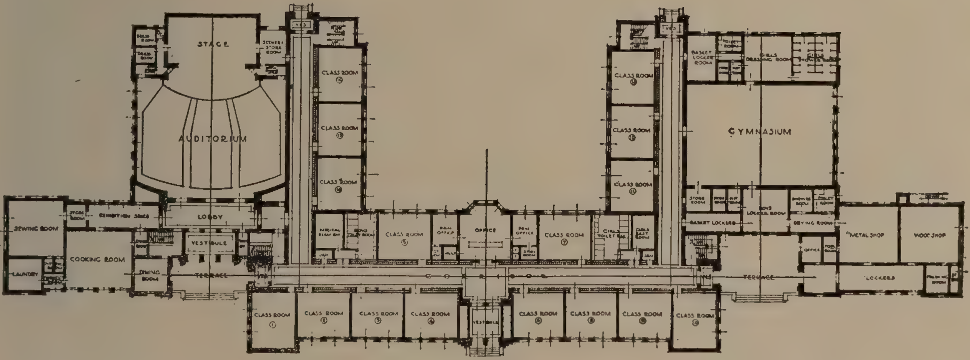
SOUTH JUNIOR HIGH SCHOOL, WALTHAM, MASS.
Kilham, Hopkins & Greeley, Architects



First Floor Plan

EAST SIDE JUNIOR HIGH SCHOOL, APPLETON, WISCONSIN

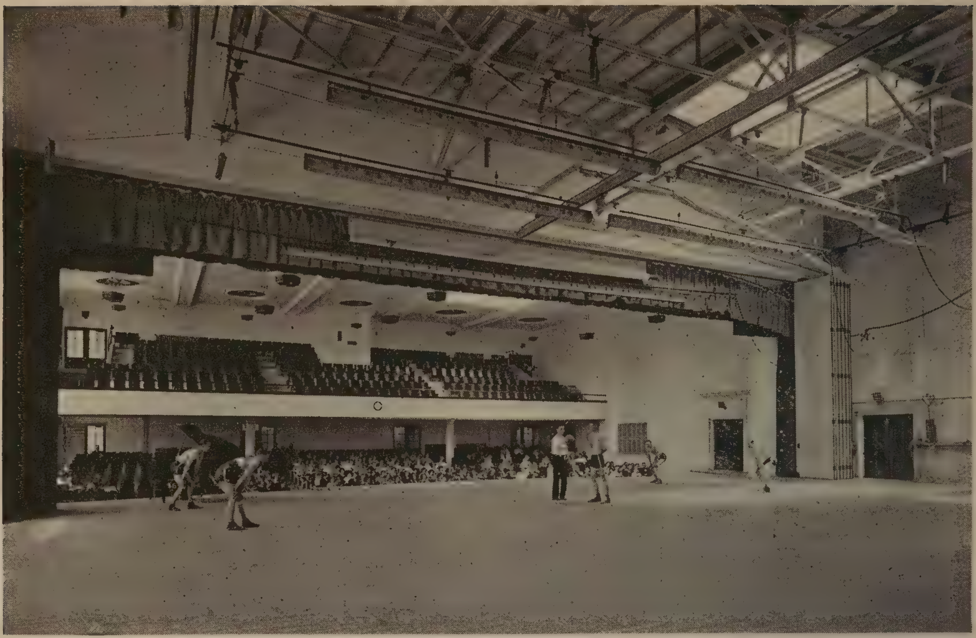
Perkins, Fellows & Hamilton, Architects



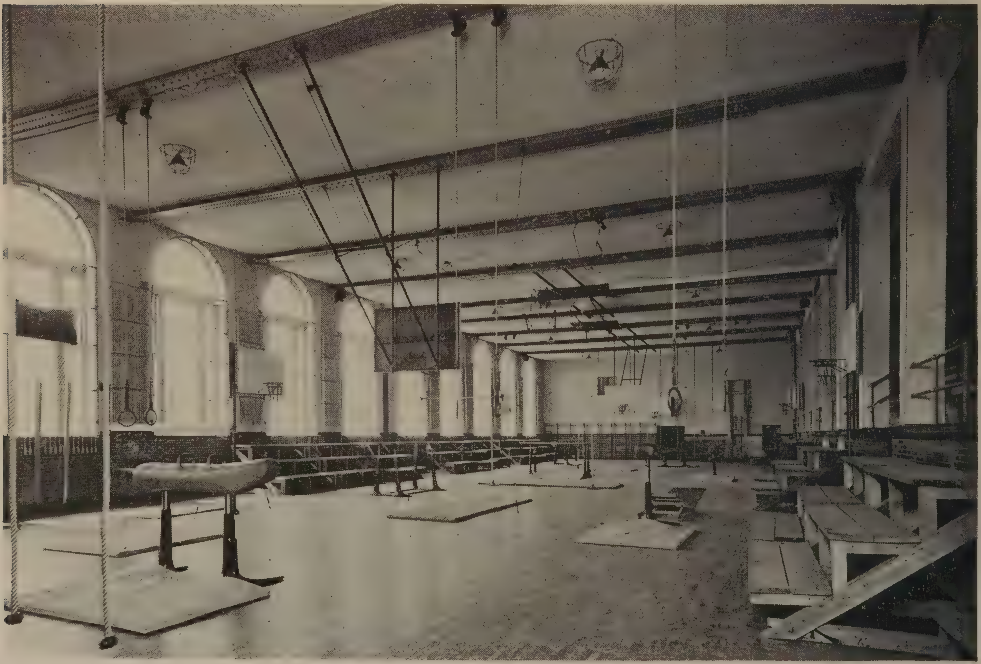
First Floor Plan

WEST SIDE JUNIOR HIGH SCHOOL, APPLETON, WISCONSIN

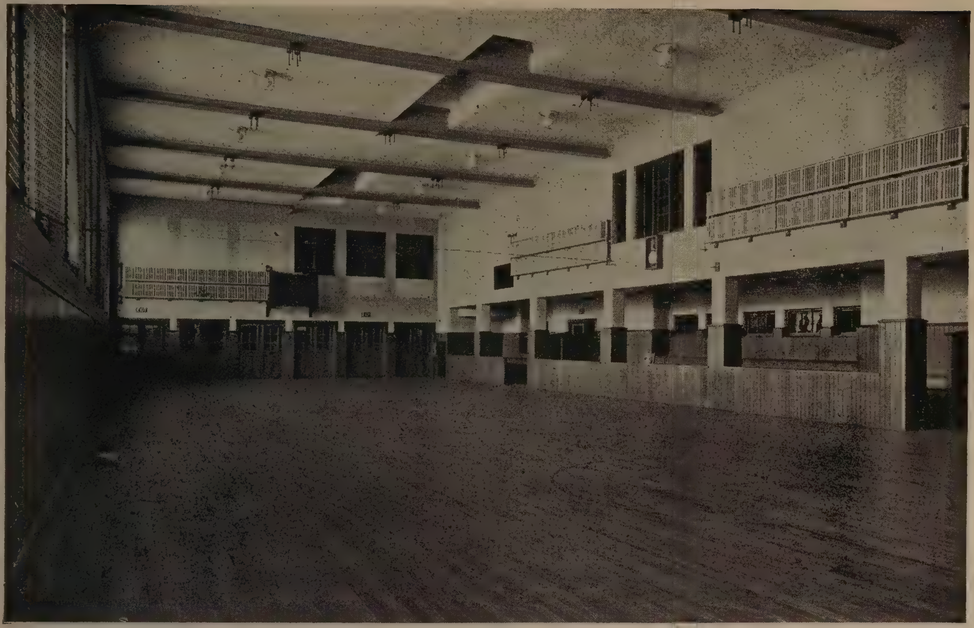
Perkins, Fellows & Hamilton, Architects



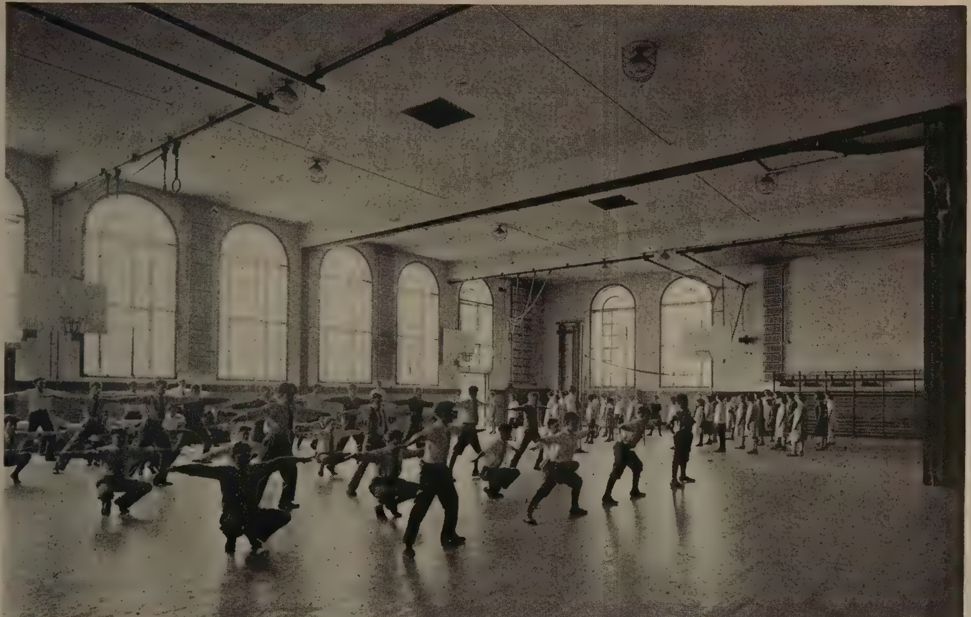
Gymnasium—Auditorium
HIGH SCHOOL, BECKLEY, WEST VIRGINIA
Wm. B. Ittner, Architect



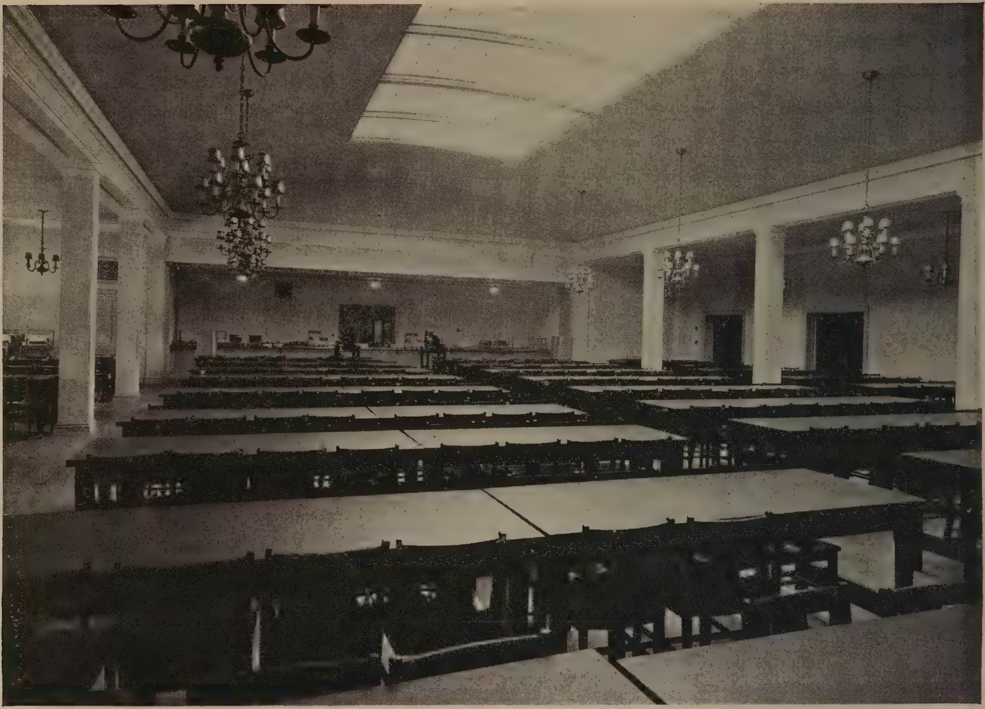
Gymnasium
HIGH SCHOOL, ORANGE, N. J.
Ernest Sibley, Architect



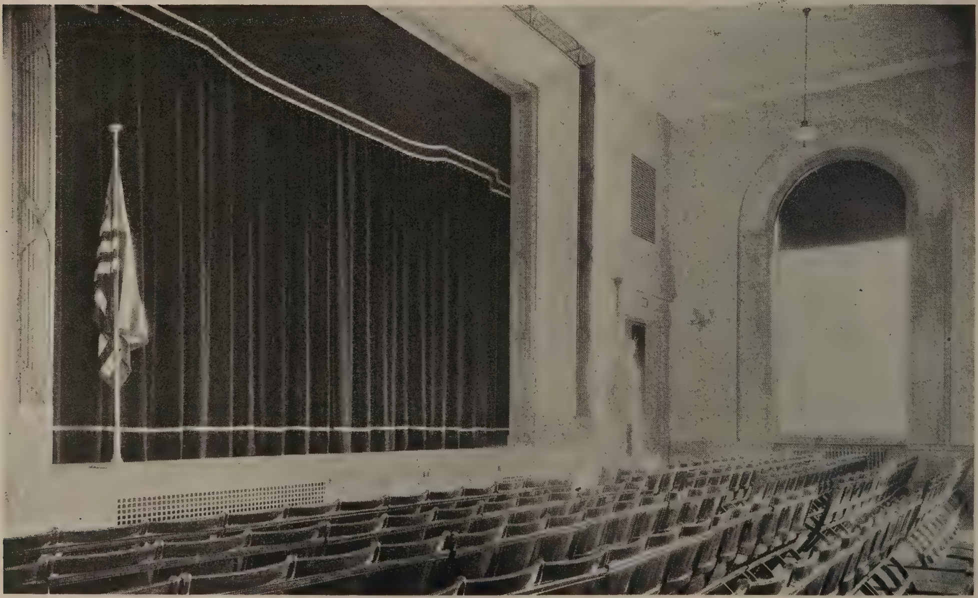
Gymnasium—Showing Bleachers at Side
SOUTH JUNIOR HIGH SCHOOL, WALTHAM, MASS.
Kilham, Hopkins & Greeley, Architects



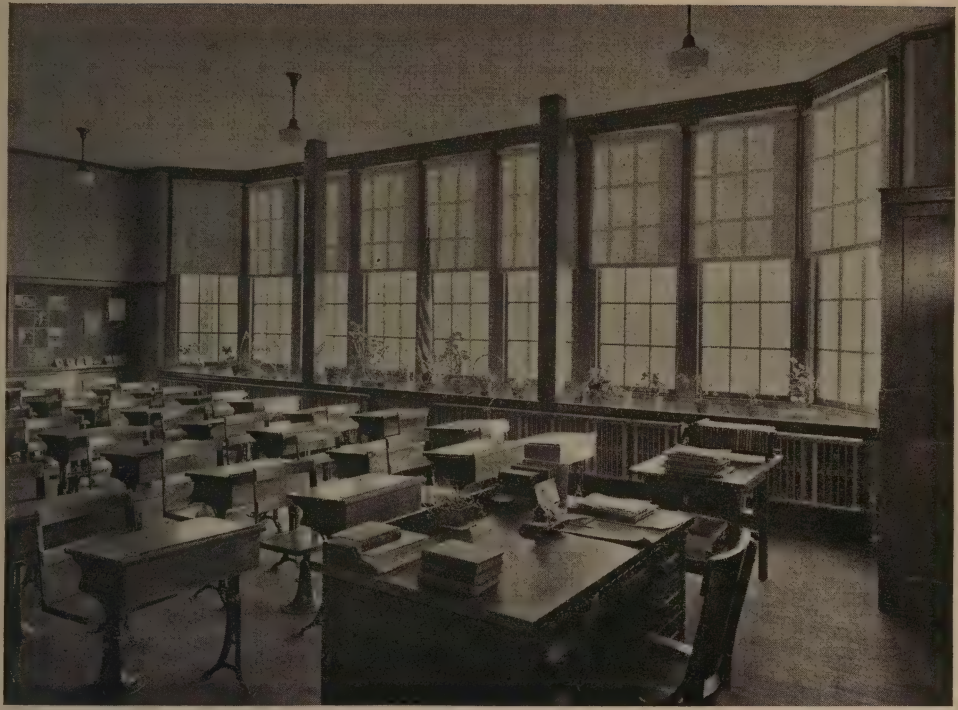
Gymnasium
EMERSON HIGH SCHOOL, DAYTON
Wm. B. Ittner, Architect



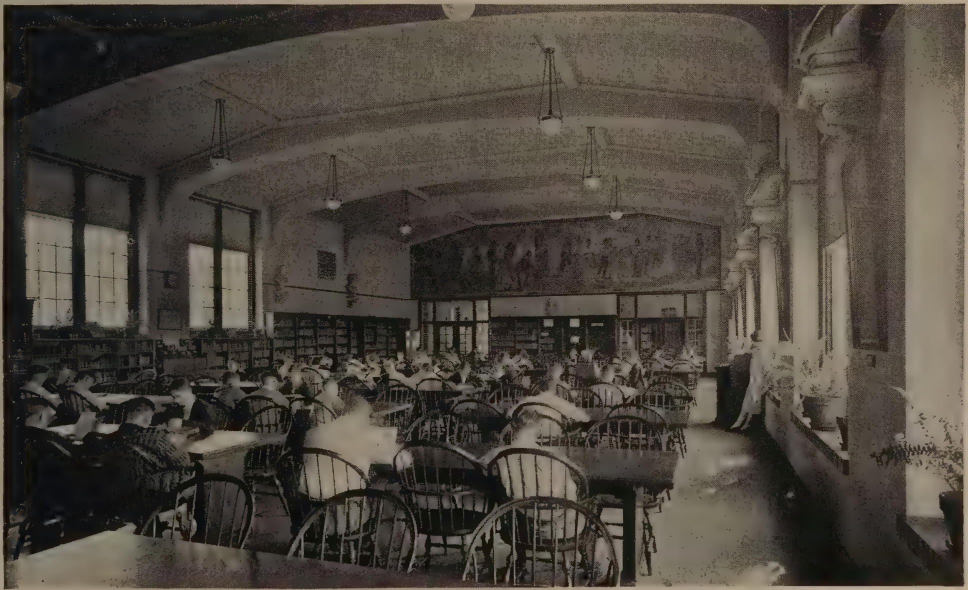
Study Room
HIGH SCHOOL, ORANGE, N. J.
Ernest Sibley, Architect



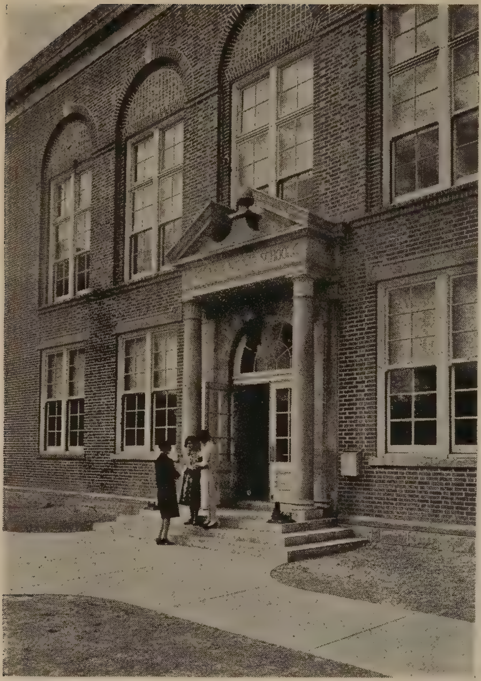
Auditorium
SOUTH JUNIOR HIGH SCHOOL, WALTHAM, MASS.
Kilham, Hopkins & Greeley, Architects



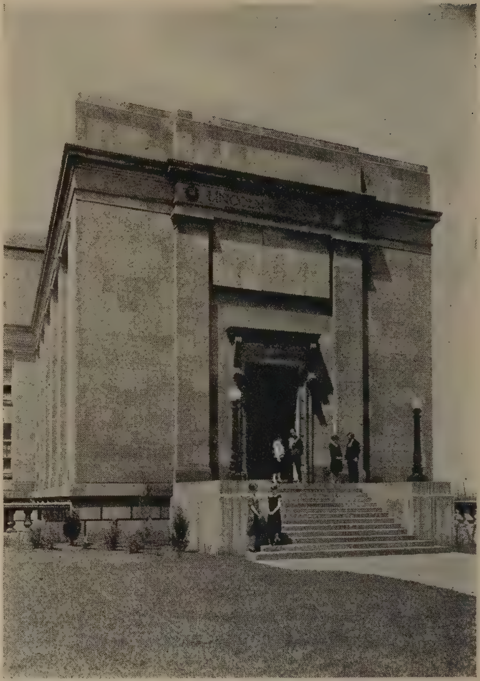
Daylight Class Room
SOUTH JUNIOR HIGH SCHOOL, WALTHAM, MASS.
Kilham, Hopkins & Greeley, Architects



Library-Study Room
HIGH SCHOOL, GREENFIELD, OHIO
Wm. B. Ittner, Architect



Entrance Detail
HIGH SCHOOL, BECKLEY, WEST VIRGINIA
Wm. B. Ittner, Architect

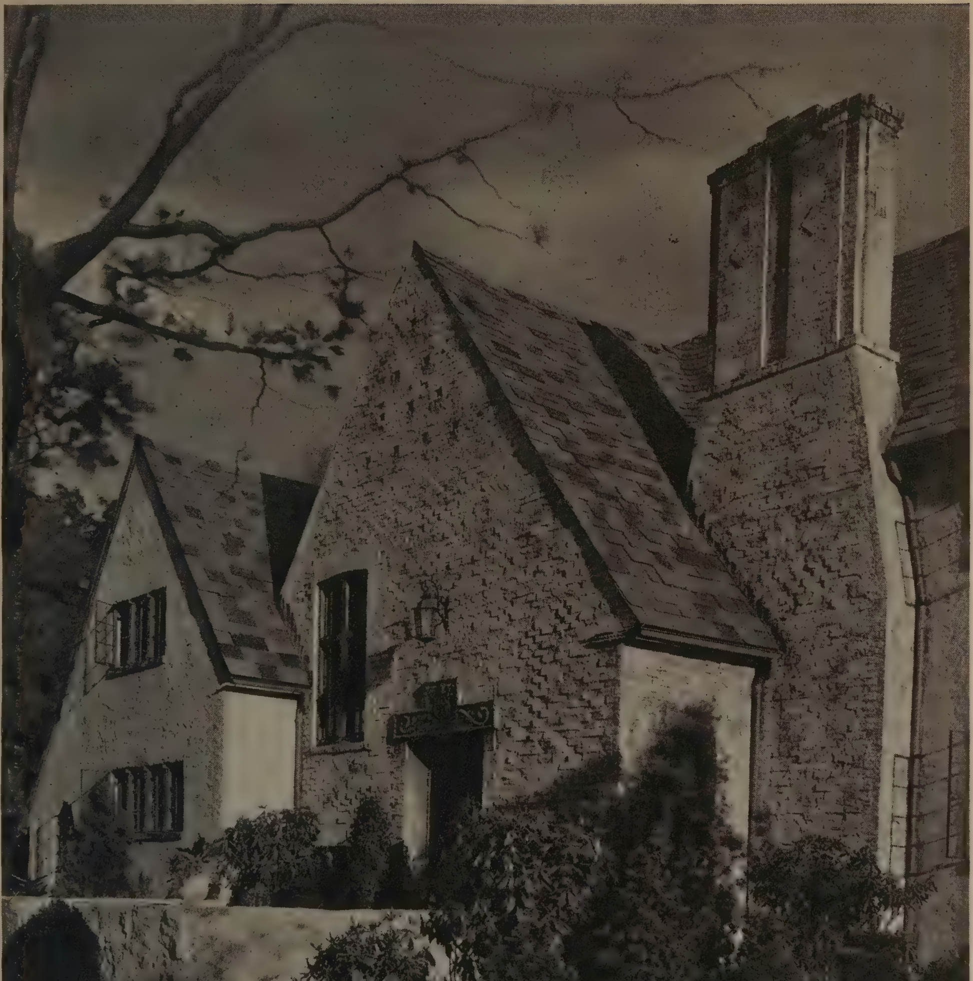


Entrance Detail
CENTRAL HIGH SCHOOL, COLUMBUS, OHIO
Wm. B. Ittner, Architect

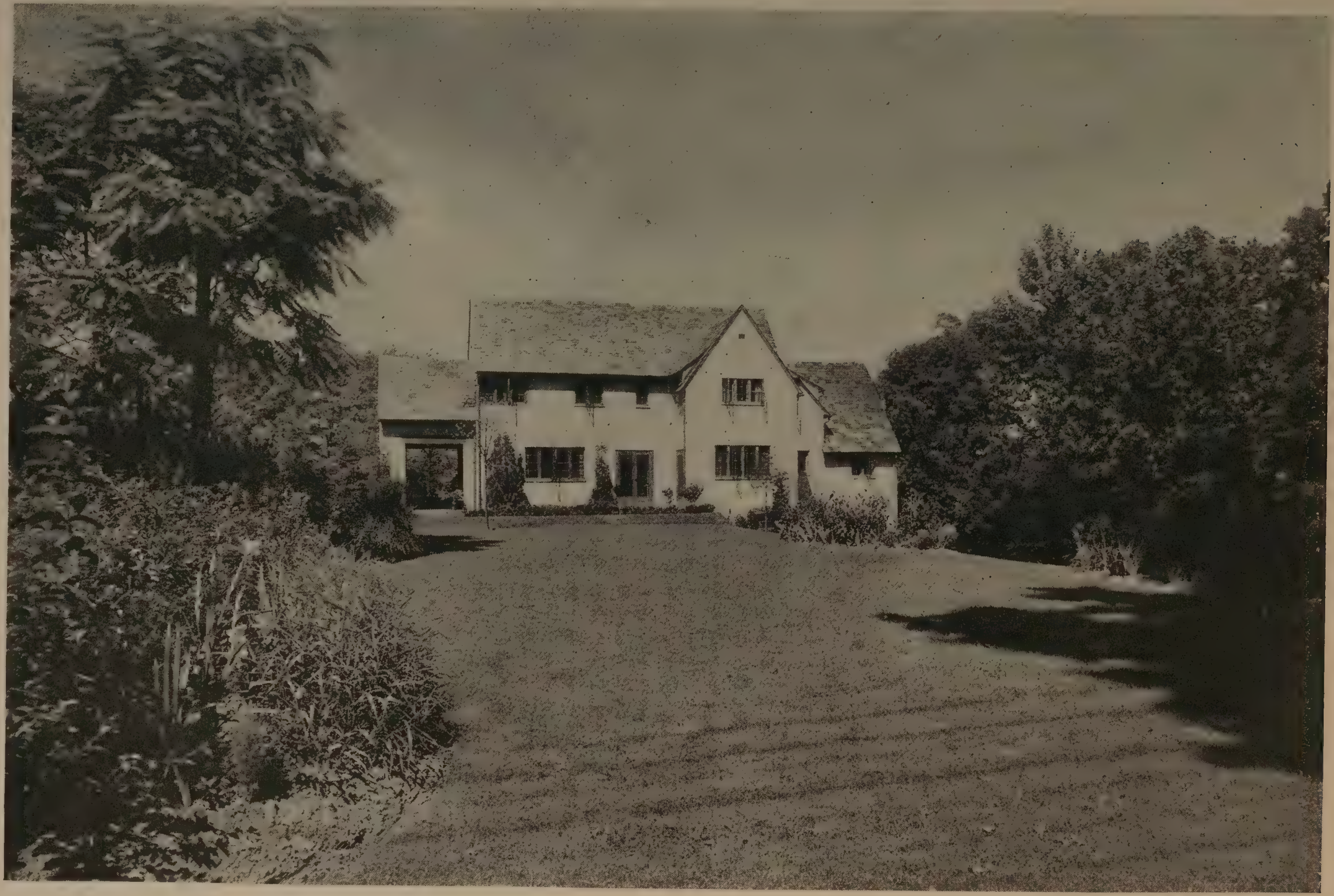
but little new in architectural design, but we can expect good honest design. In these efforts we will probably find that the great historic styles will serve us best—the English Tudor and the Colonial styles being more suitable for our Northern States and the Spanish and Italian for the Southern States. Try as we may, no one has yet successfully worked in any other vein. Startling and brilliant men have flashed their personalities upon the horizon of art, and for a time have cast an ominous shadow upon the historic forms, but each has run his little race without leaving a truly permanent imprint upon our art. For centuries, combinations of the forms of great historic styles have left on our subconscious minds an effect that no ephemeral flash of personal vanity can erase.

PORTFOLIO

CVRRENT · ARCHITECTVRE



RESIDENCE OF S. L. VANDEVEER, ESQ., GREAT NECK, L. I.
LeRoy P. Ward, Architect



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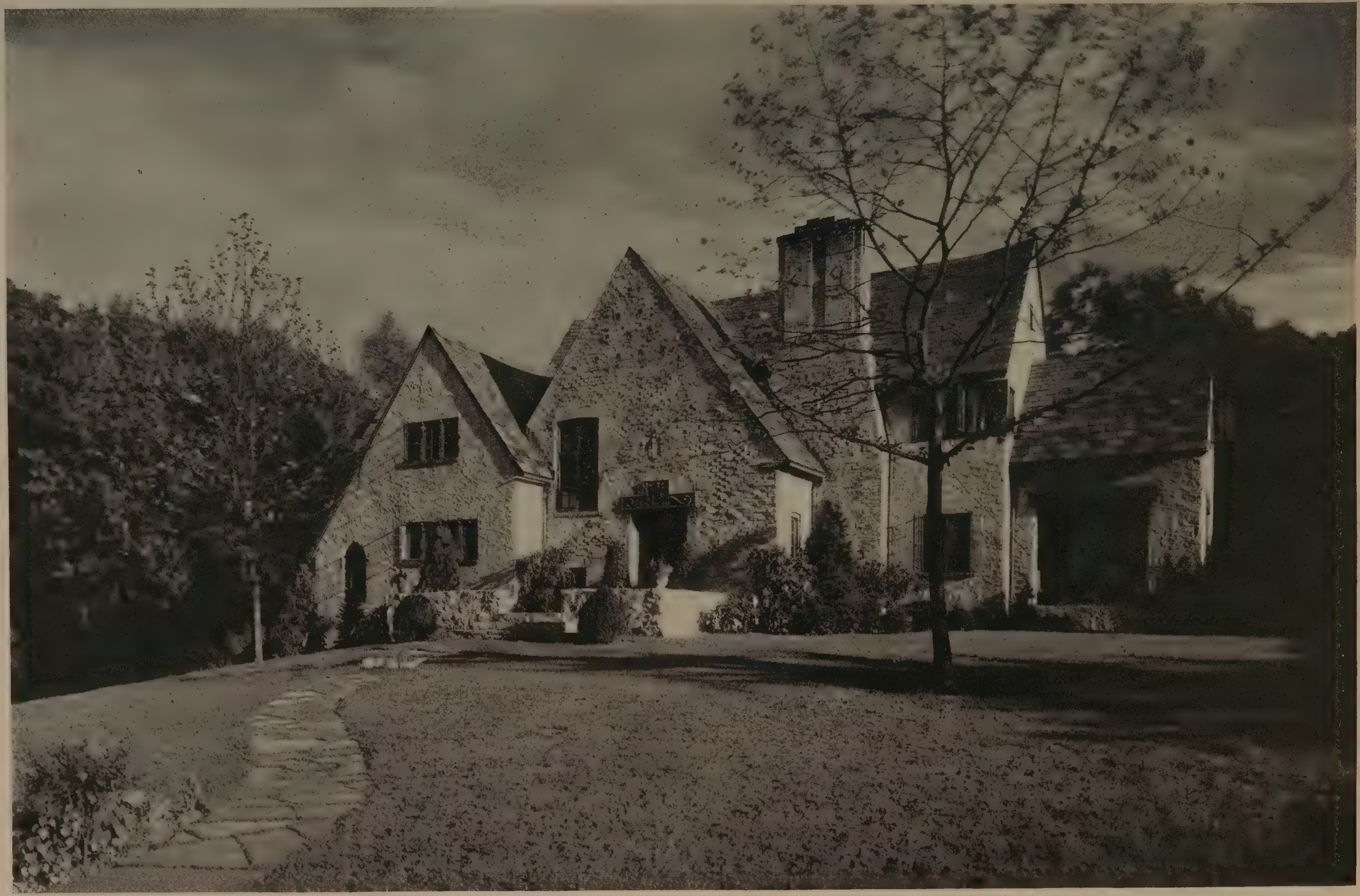
LeRoy P. Ward, Architect



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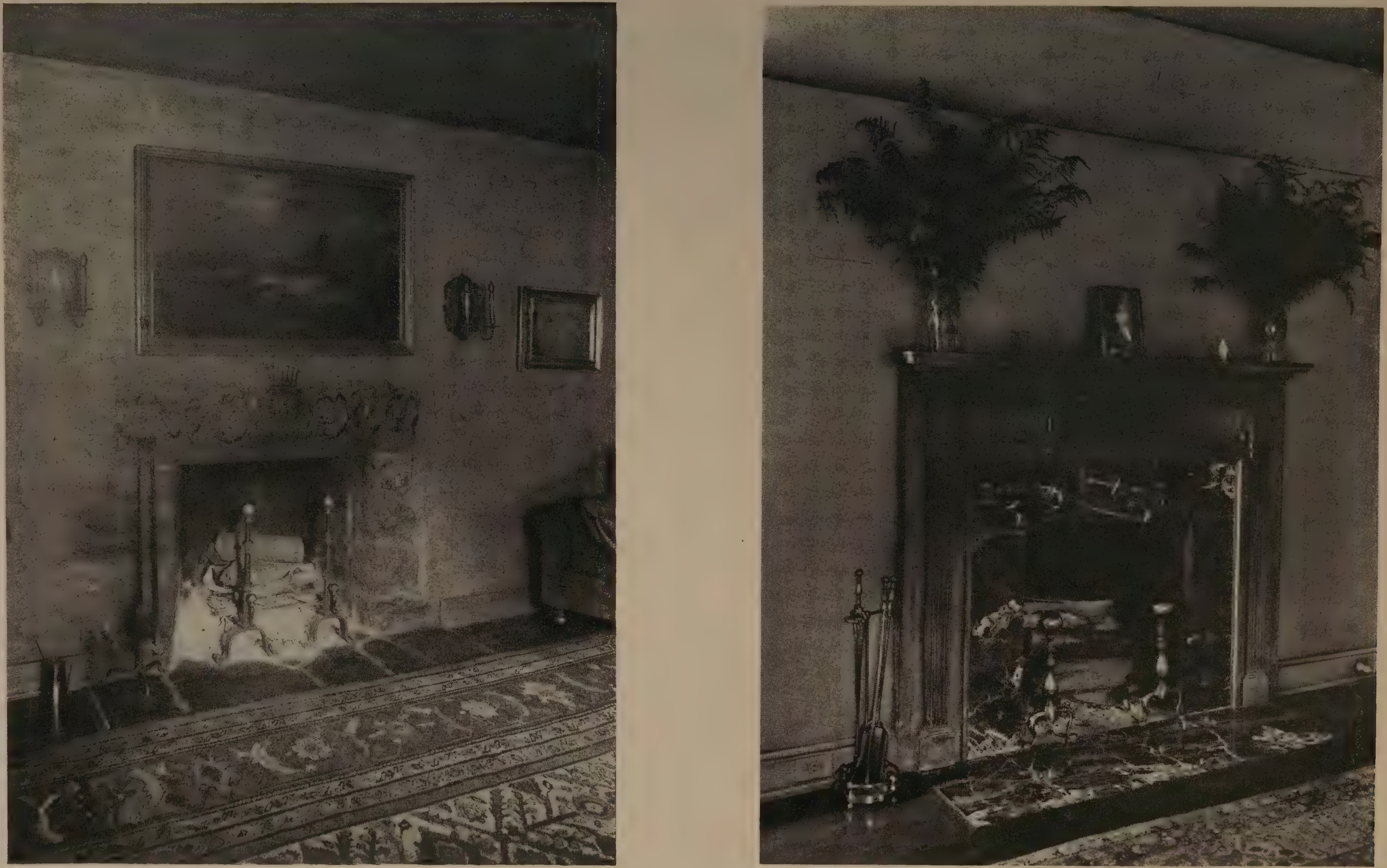
LeRoy P. Ward, Architect



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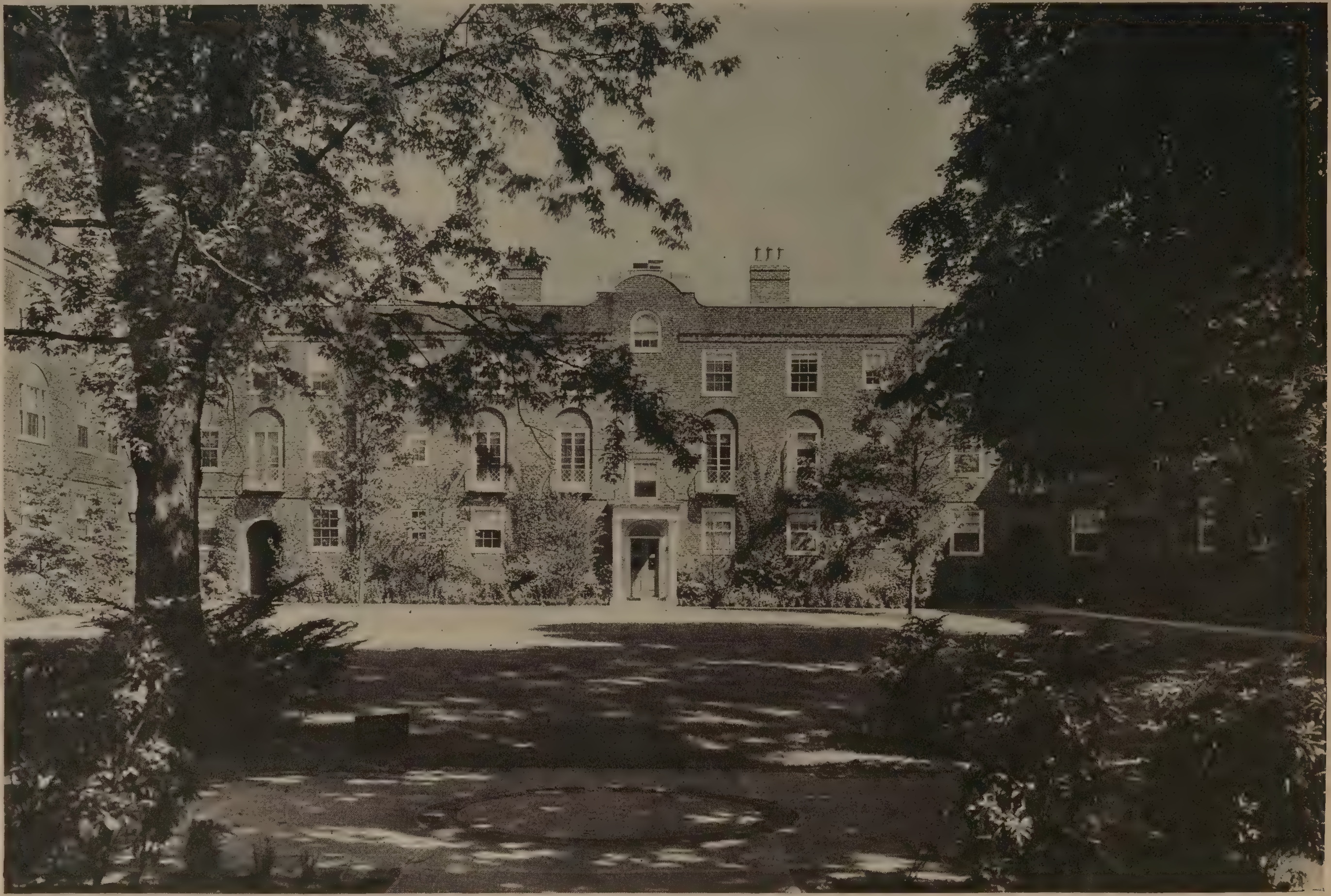
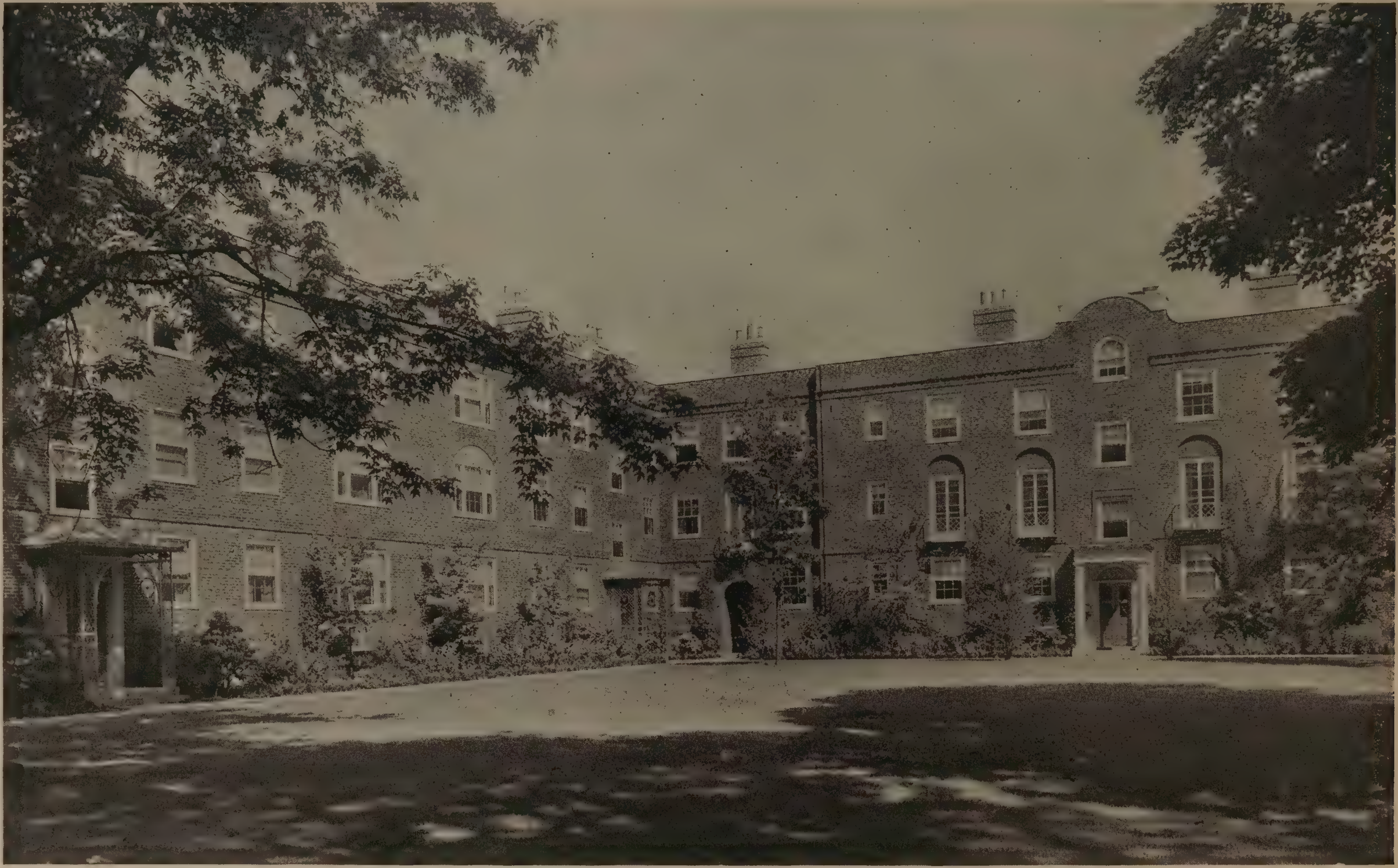
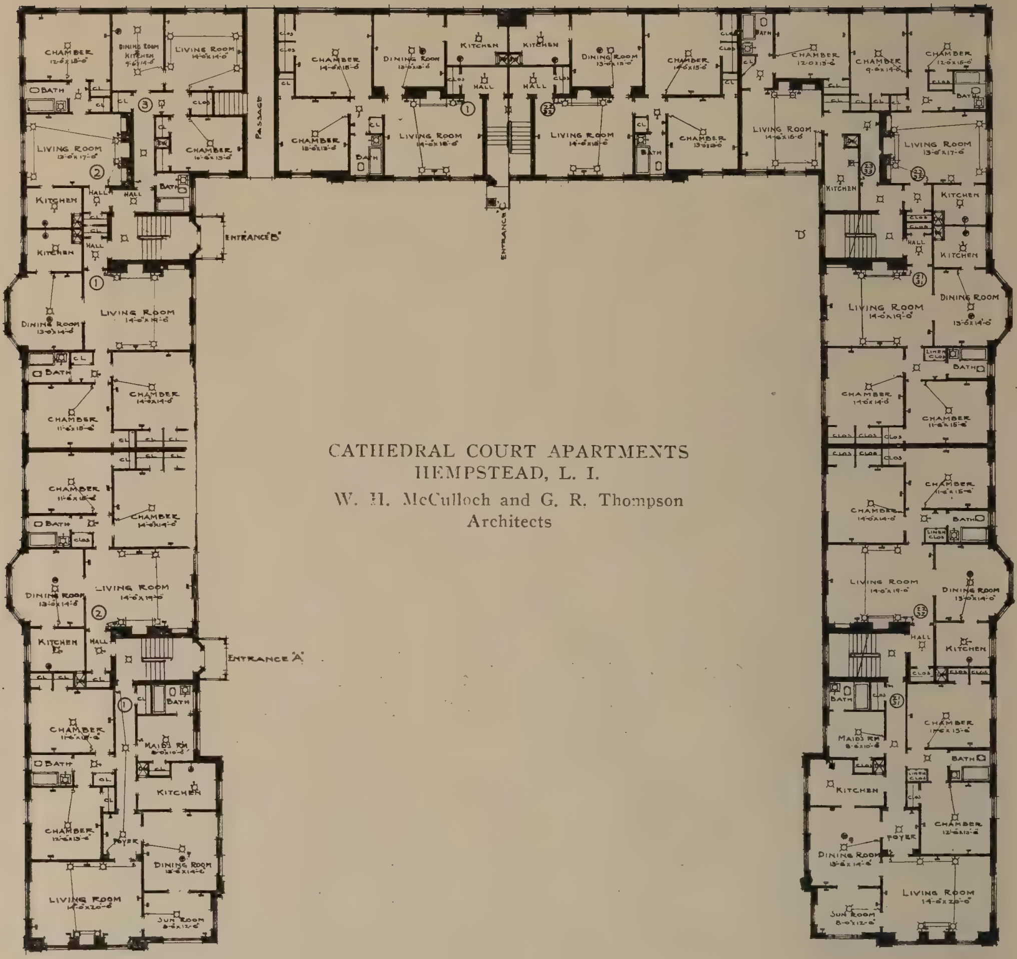
LeRoy P. Ward, Architect



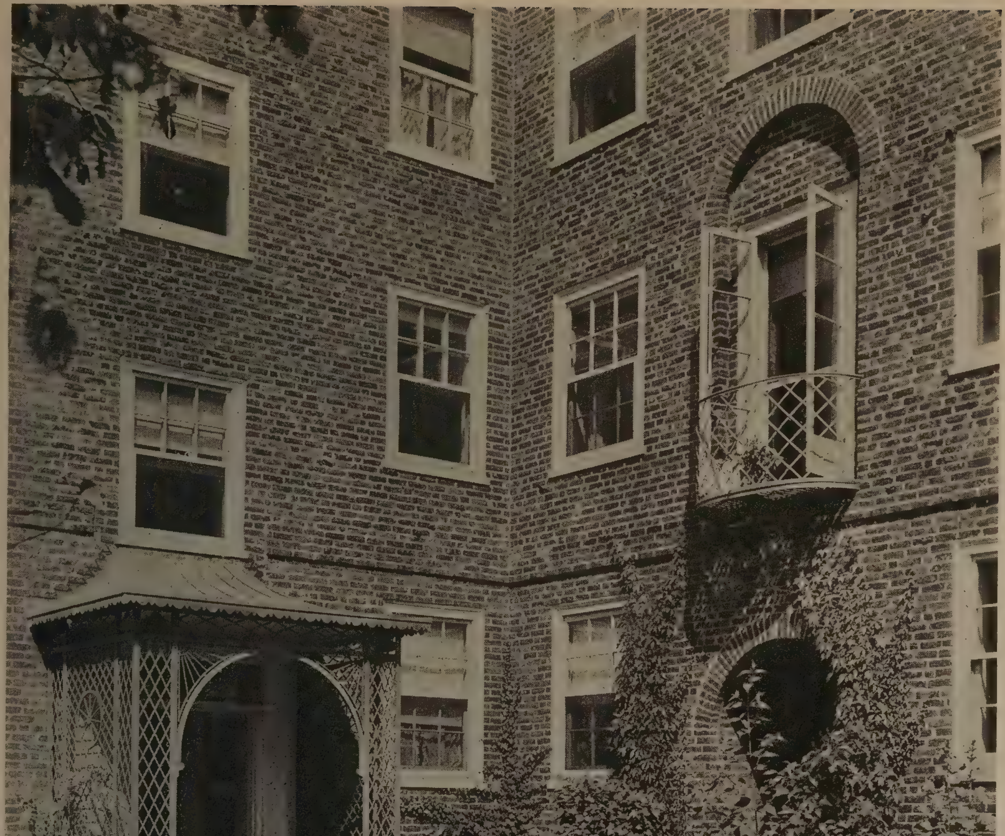
CATHEDRAL COURT APARTMENTS, HEMPSTEAD, L. I.
W. H. McCulloch and G. R. Thompson, Architects



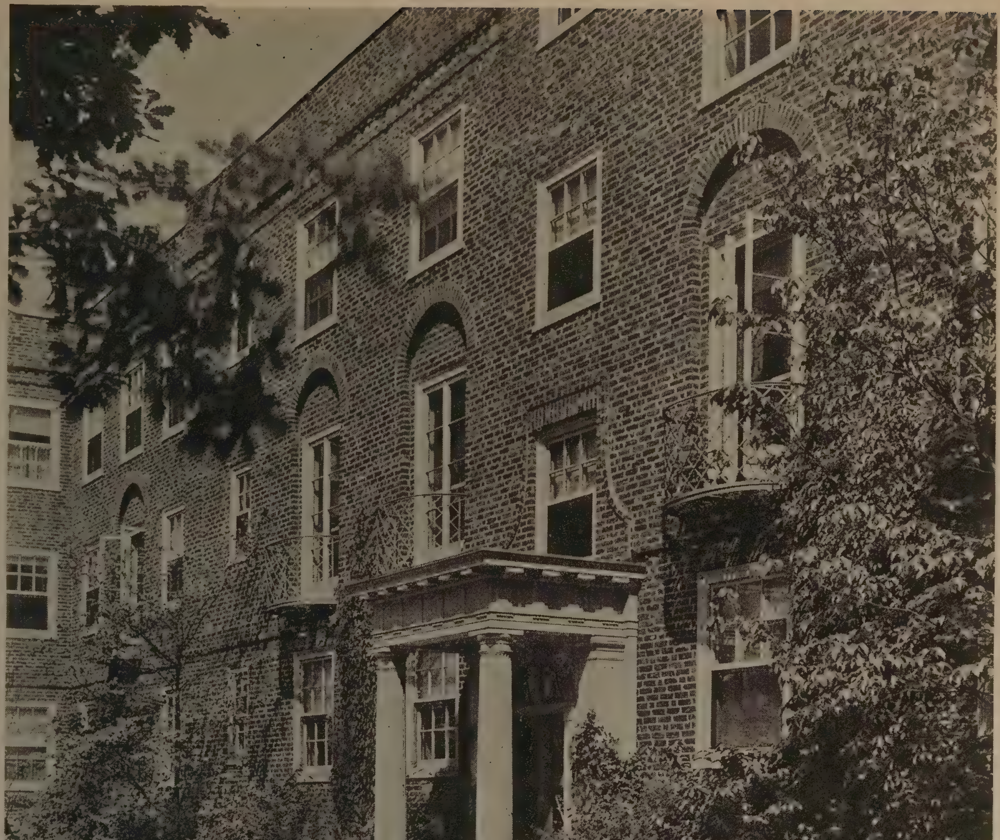
CATHEDRAL COURT APARTMENTS, HEMPSTEAD, L. I.
W. H. McCulloch and G. R. Thompson, Architects



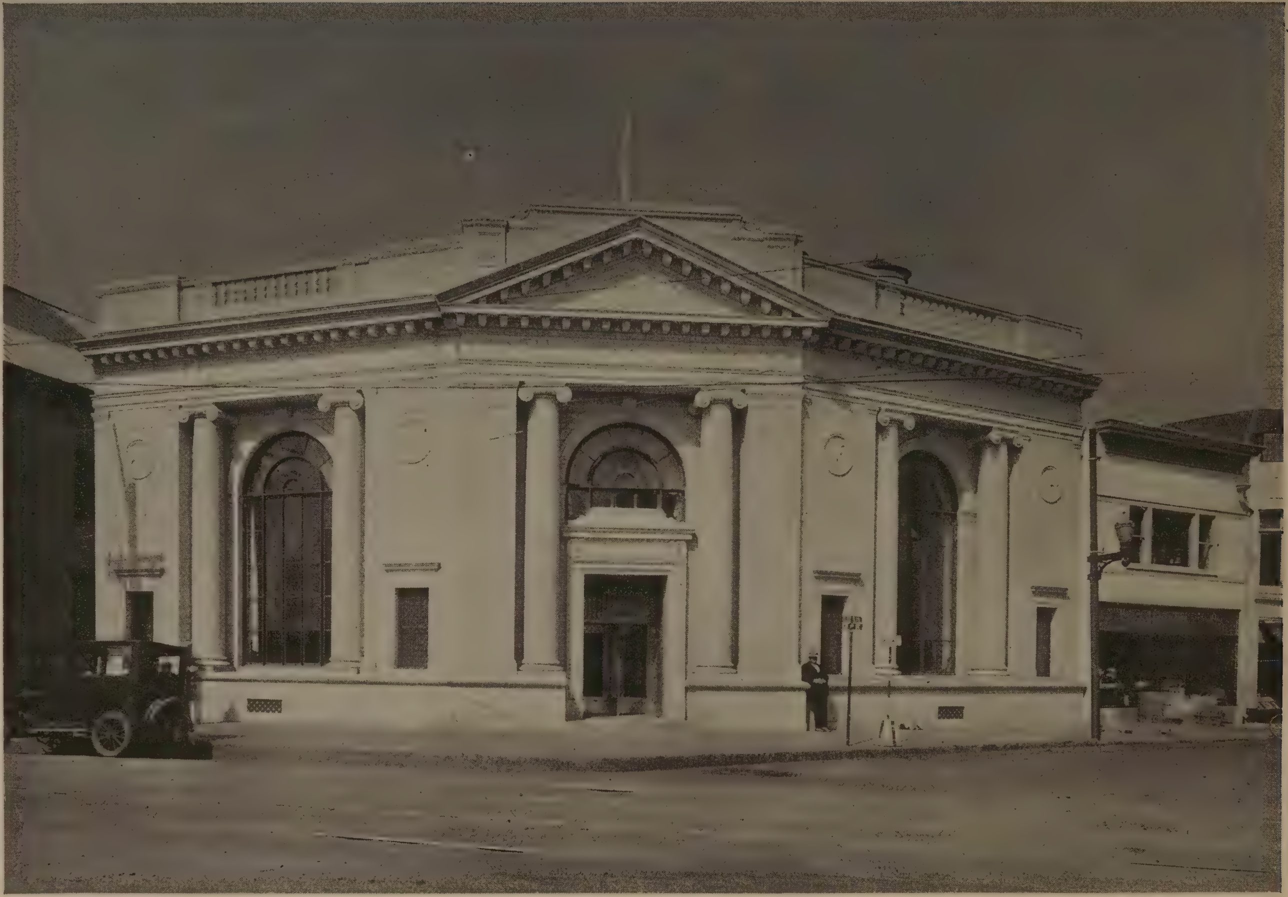
CATHEDRAL COURT APARTMENTS
HEMPSTEAD, L. I.
W. H. McCulloch and G. R. Thompson
Architects



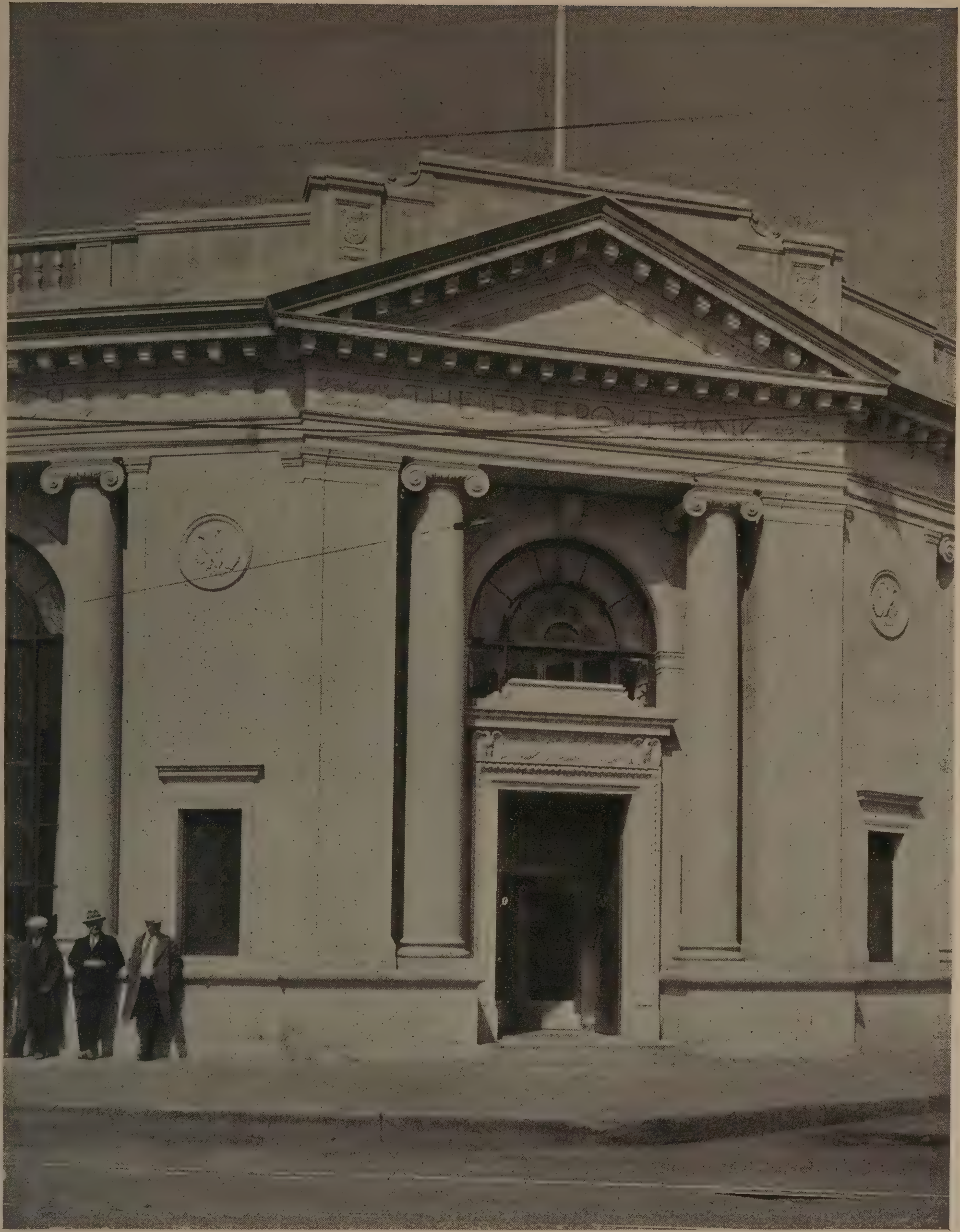
CATHEDRAL COURT APARTMENTS, HEMPSTEAD, L. I.
W. H. McCulloch and G. R. Thompson, Architects



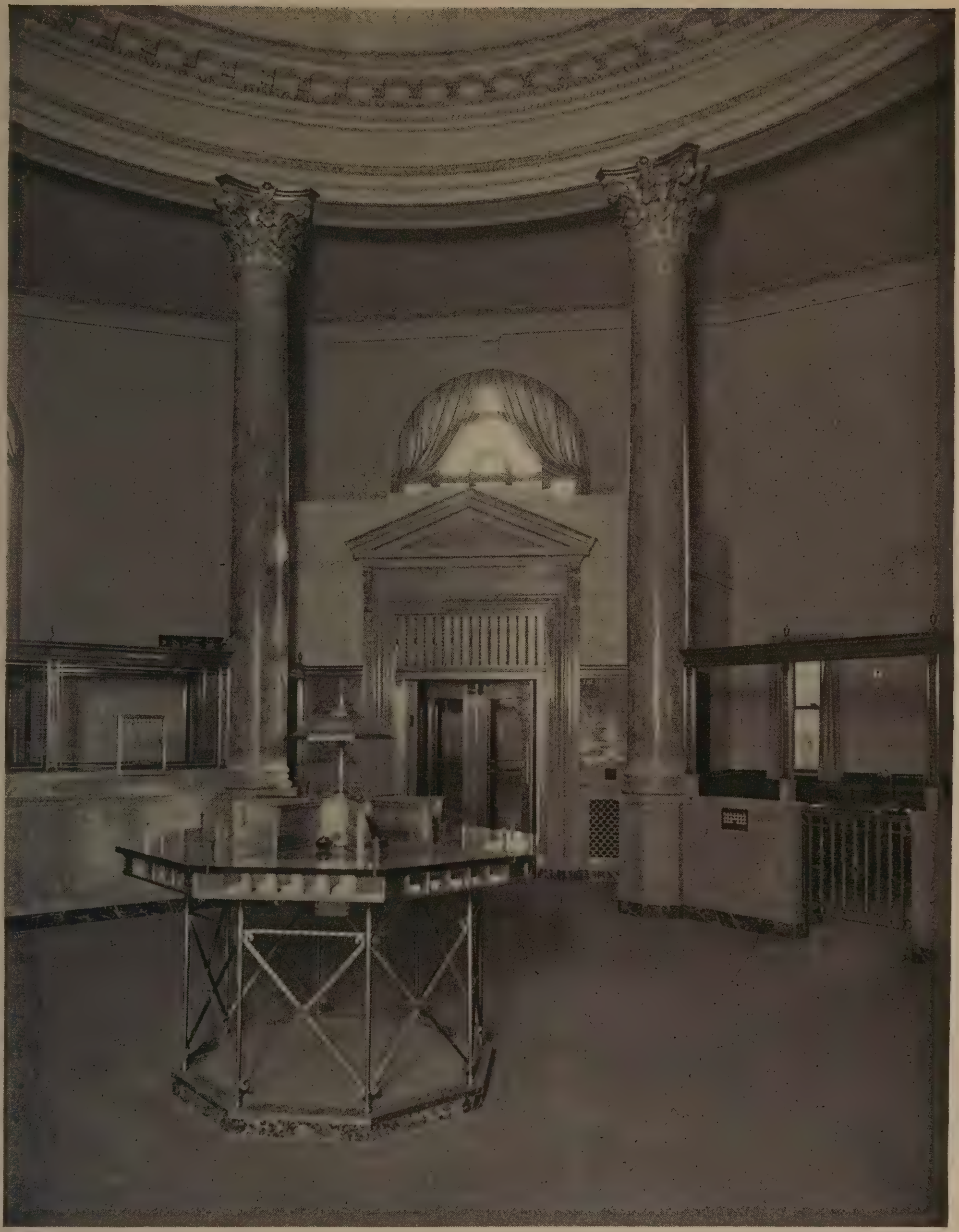
CATHEDRAL COURT APARTMENTS, HEMPSTEAD, L. I.
W. H. McCulloch and G. R. Thompson, Architects



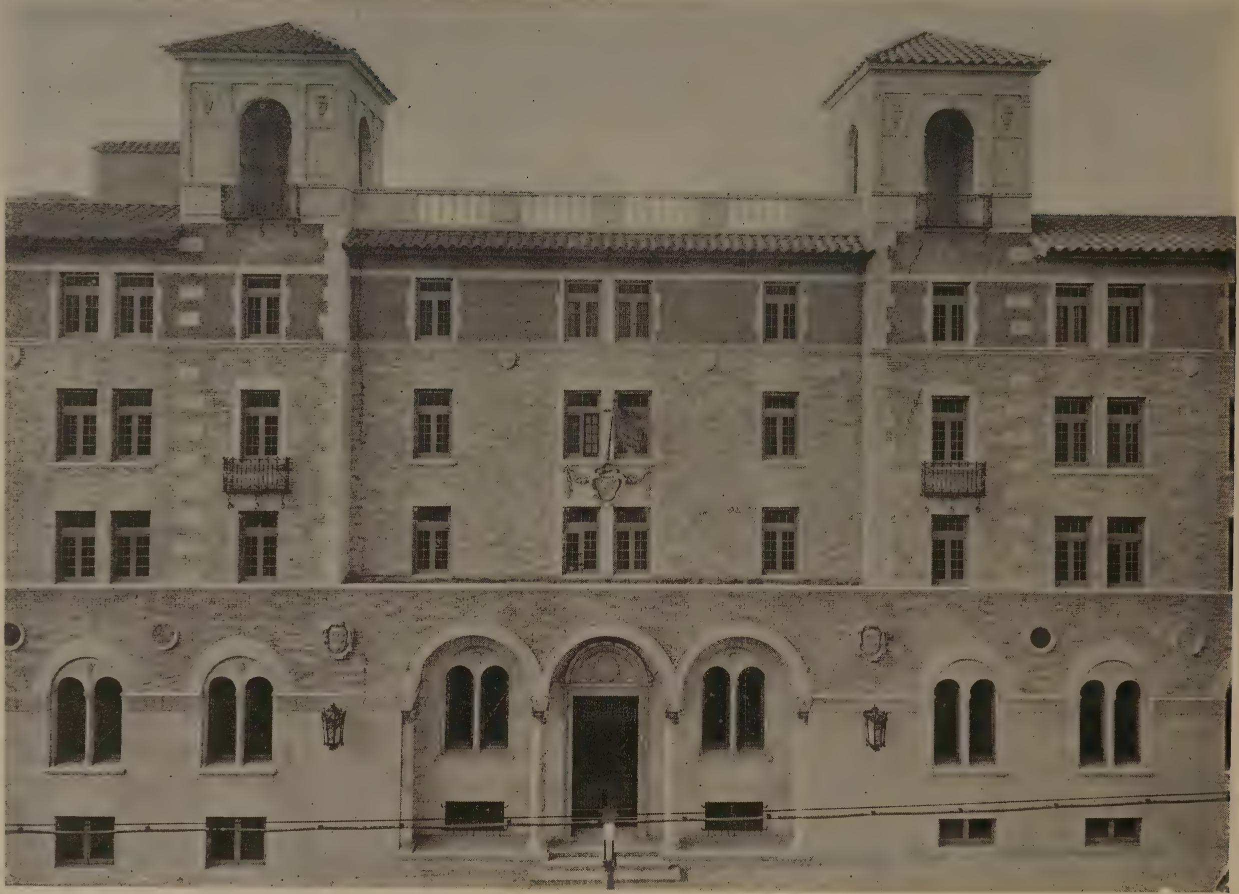
THE FREEPORT NATIONAL BANK, FREEPORT, L. I.
Purdy & Davis, Architects



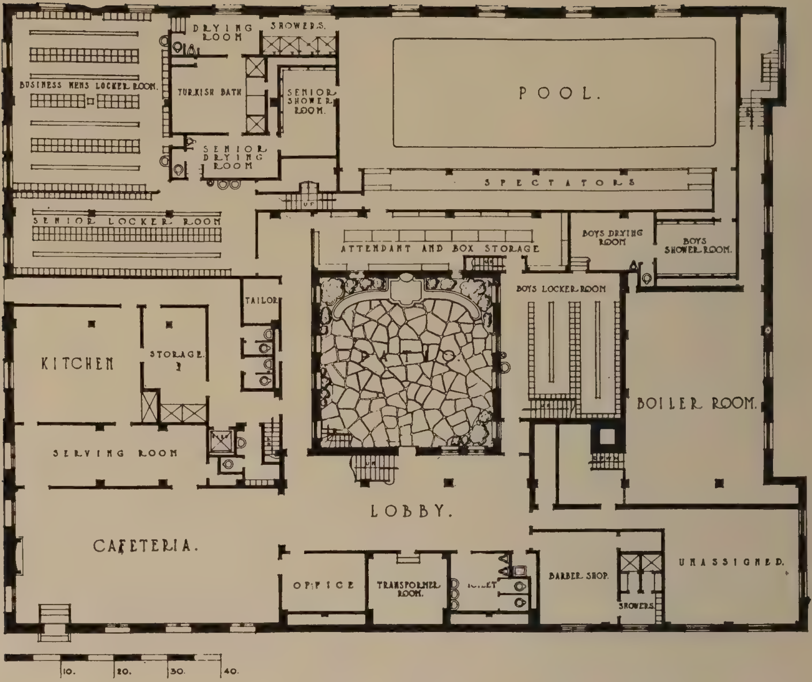
THE FREEPORT NATIONAL BANK, FREEPORT, L. I.
Purdy & Davis, Architects



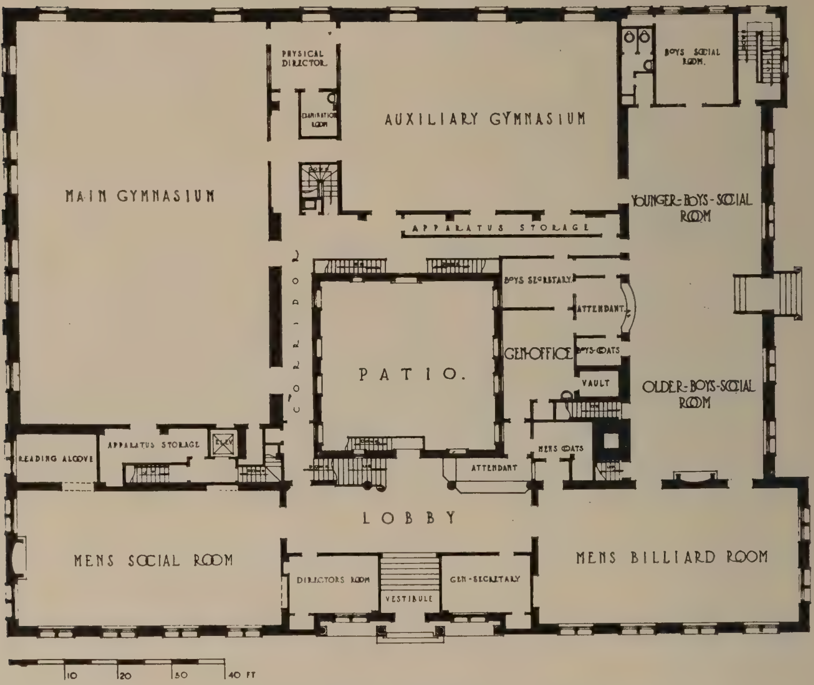
THE FREEPORT NATIONAL BANK, FREEPORT, L. I.
Purdy & Davis, Architects



Y. M. C. A. BUILDING, SHREVEPORT, LOUISIANA
Clarence W. King, Architect



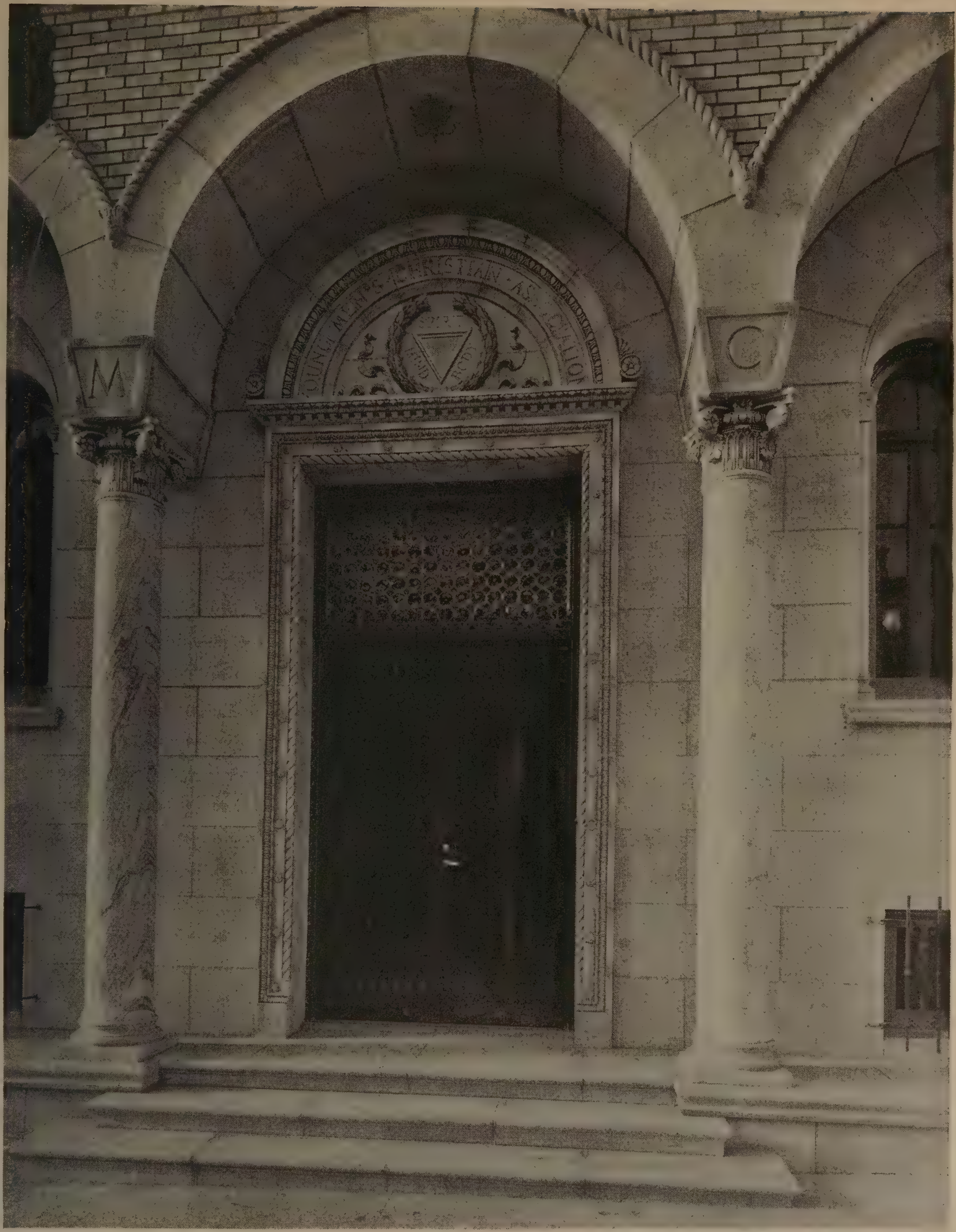
Plan of Basement



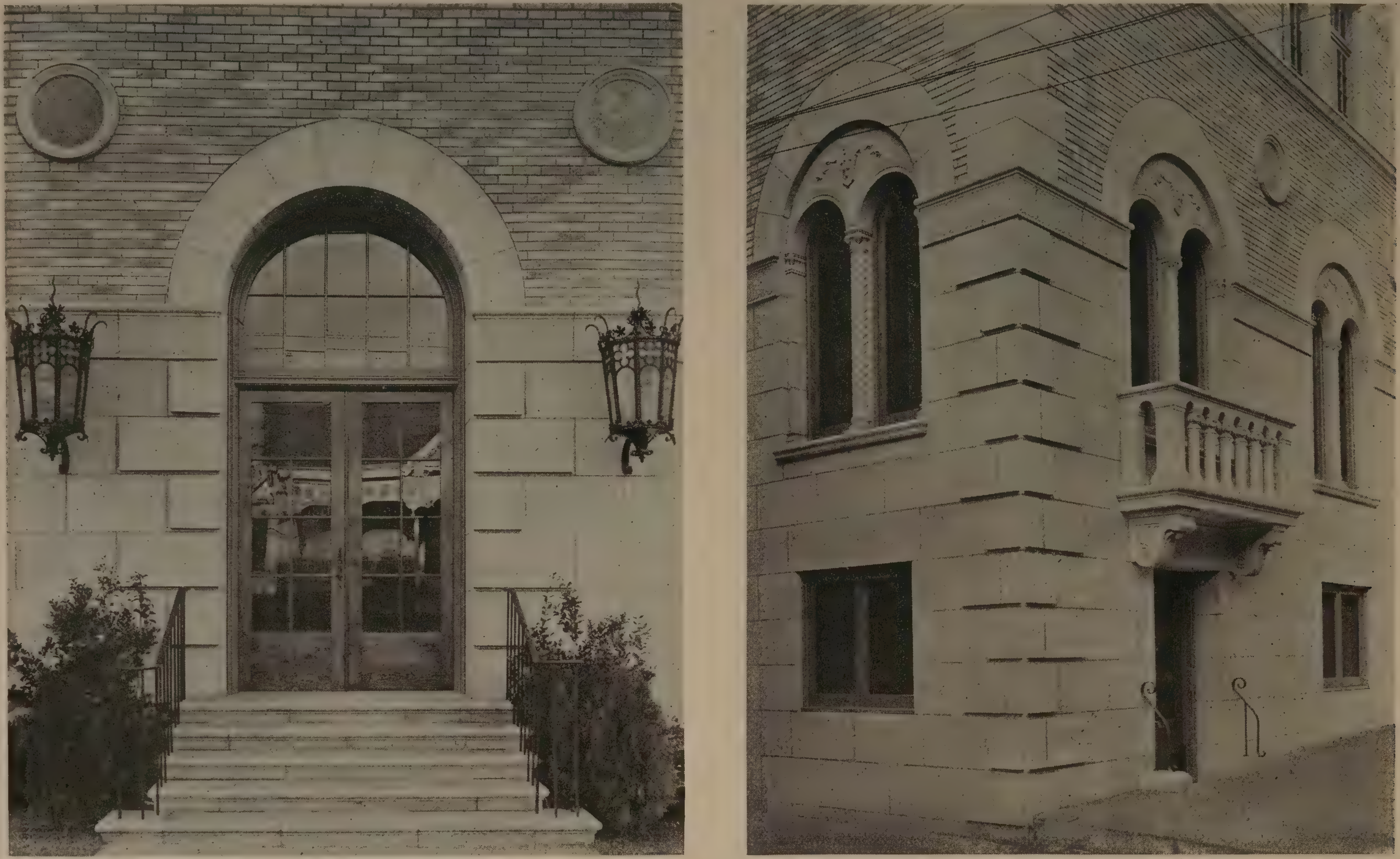
First Floor Plan

Y. M. C. A. BUILDING, SHREVEPORT, LOUISIANA

Clarence W. King, Architect



Y. M. C. A. BUILDING, SHREVEPORT, LOUISIANA
Clarence W. King, Architect

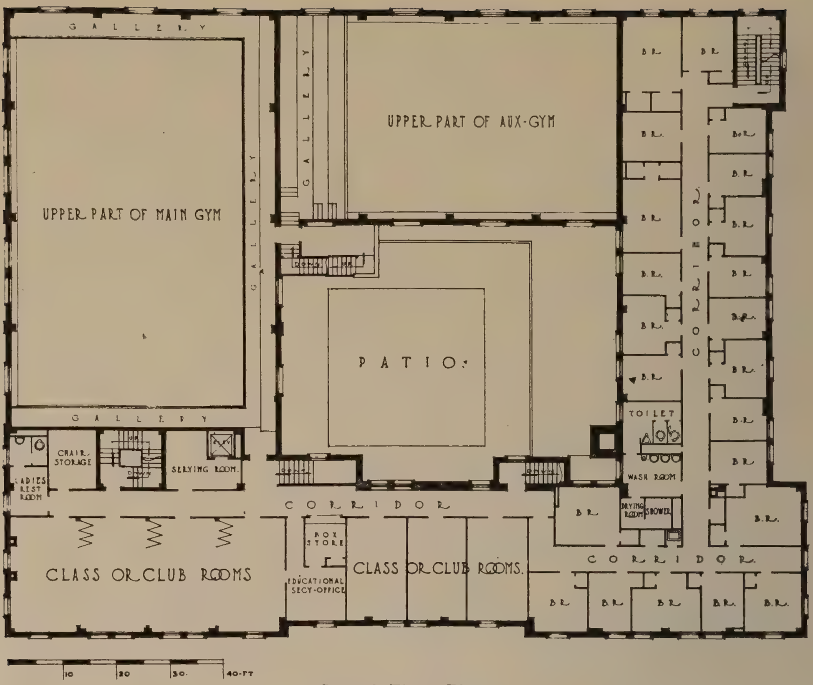


Boys' Department Entrance

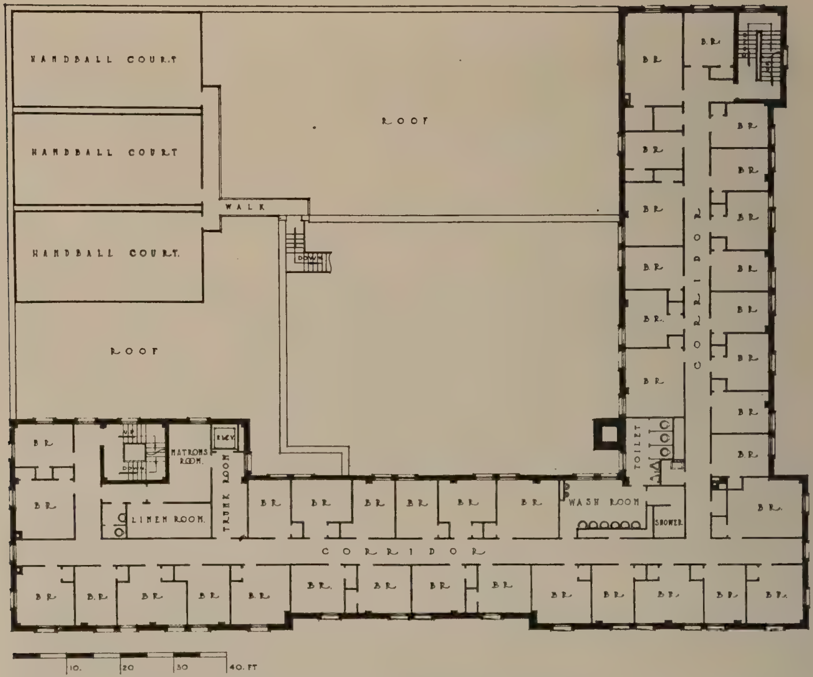
Cafeteria Entrance

Y. M. C. A. BUILDING, SHREVEPORT, LOUISIANA

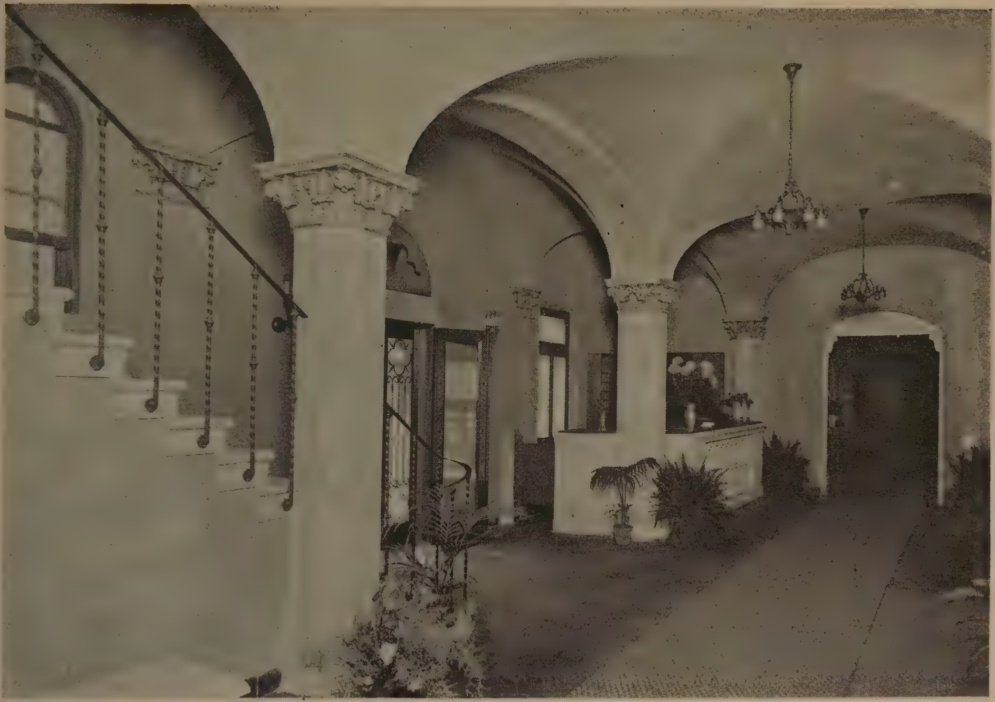
Clarence W. King, Architect



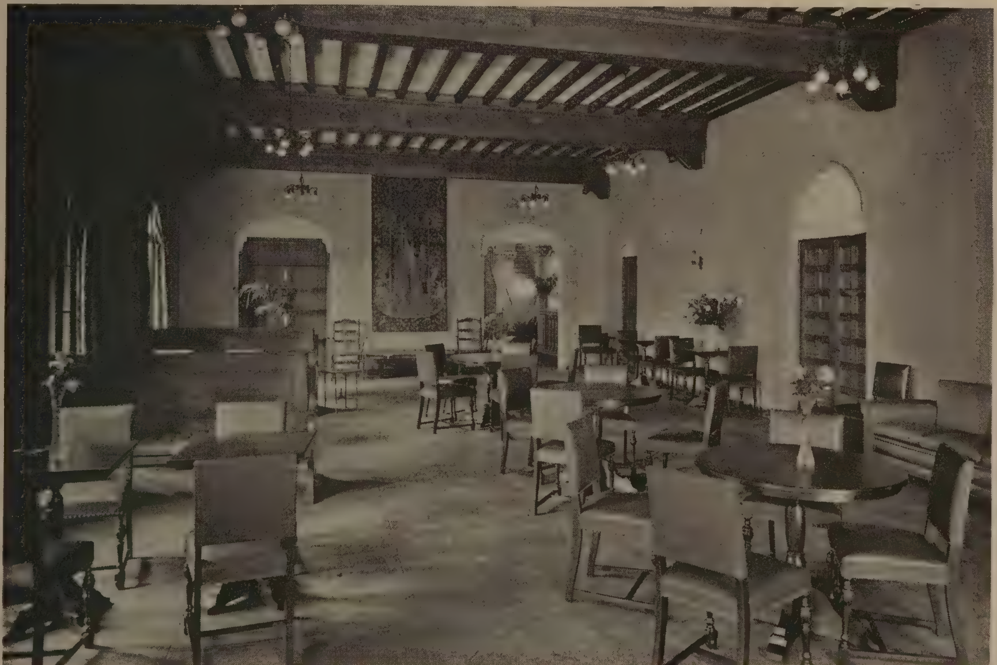
Second Floor Plan



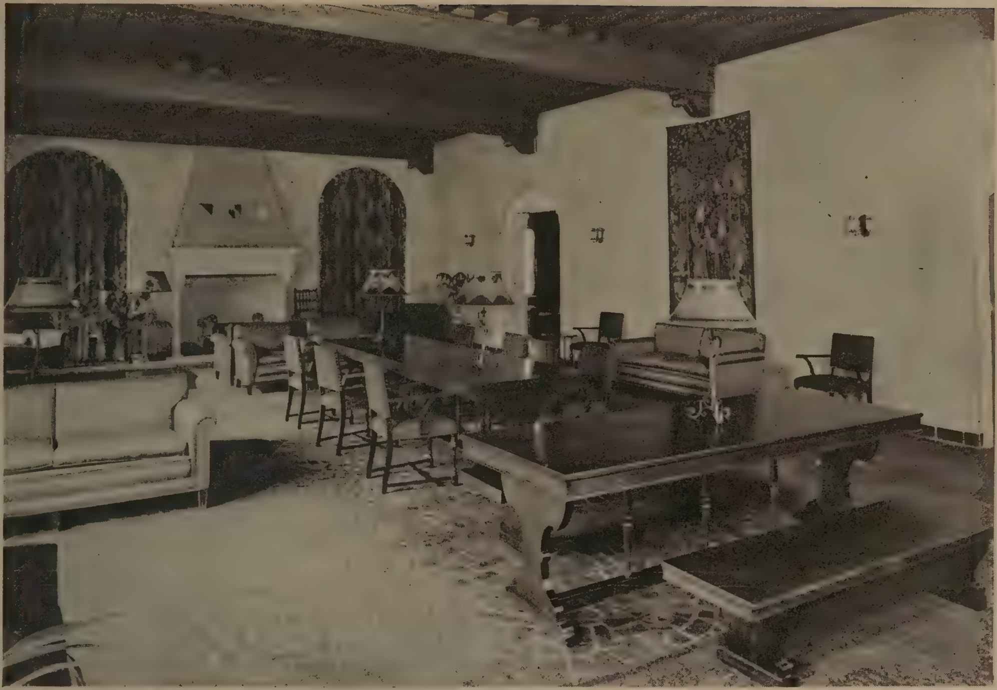
Typical Third and Fourth Floor Plans
Y. M. C. A. BUILDING, SHREVEPORT, LOUISIANA
Clarence W. King, Architect



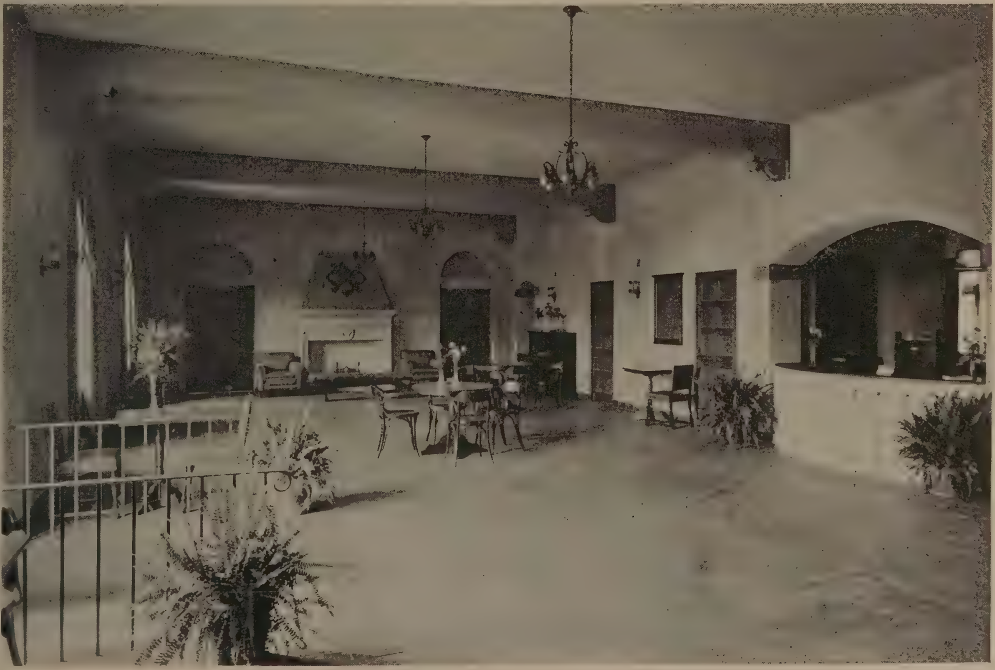
Lobby



Men's Social Room
Y. M. C. A. BUILDING, SHREVEPORT, LOUISIANA
Clarence W. King, Architect



Men's Social Room



Boys' Social Room
Y. M. C. A. BUILDING, SHREPORT, LOUISIANA
Clarence W. King, Architect

The NEW GENERAL MOTORS BUILDING NEW YORK CITY

By

S. J. Vickers

APPROACHING THE CIRCLE from Automobile Row, one is impressed by the steel structure rising majestically, tier upon tier, from the roof of the Colonnade Building. These columns and girders are to form the superstructure of the new General Motors Building and it is of the particular locations of these steel members with respect to the present structure that this article deals.

About four years ago, the three story and basement building situated on the truncated, triangular plot between Broadway, Eighth Avenue, Fifty-seventh and Fifty-eighth Streets was constructed with foundations for twenty-two additional stories. These upper stories were to take the shape of the letter U with the court facing Eighth Avenue. A theatre was to have occupied the space at the base of the court.

The abandonment of the theatre permitted a change in plan and the firm of Shreve & Lamb, architects, which had this problem under consideration, happily visioned the opportunity to change the original U plan to that of the letter H, an all-important change.

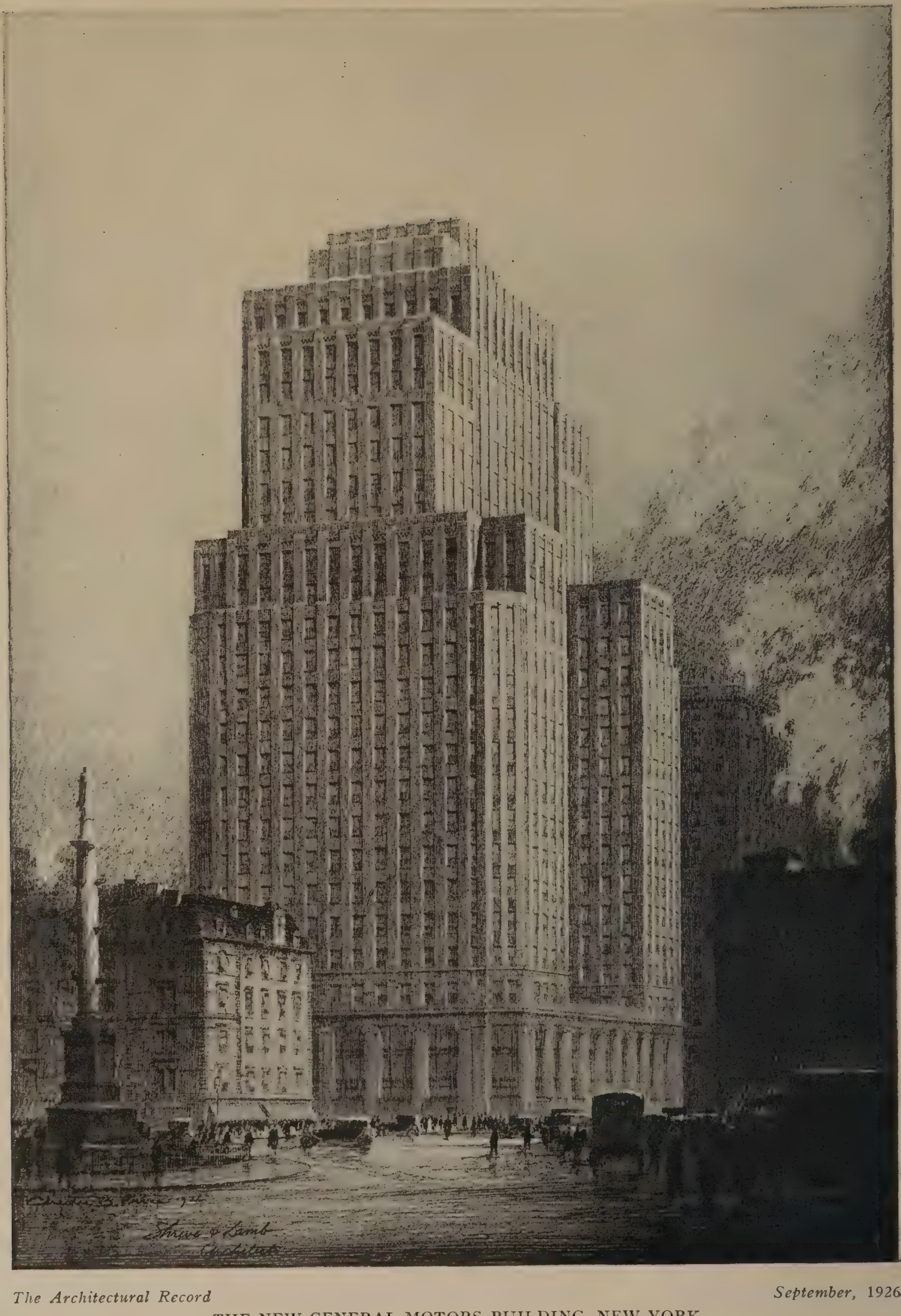
This problem appeared to have the following basic elements: 1. Maintenance of Structure; 2. The Retention of Tenants; 3. Economic Requirements.

Maintenance of Structure. It was necessary, first of all, to maintain the integrity of the present structure. The new plan called for the placing of a dozen new columns, for the reinforcement of eight existing columns, and for seven other existing columns to be replaced. In order to perform these difficult tasks, workmen were obliged to enter the basement, build foundations for the new columns, enlarge other foundations, cut floors and roof, remove old and insert new columns, make new connections to old steel and shore disconnected beams and girders. All of this and more was done with the three stories occupied and the basement used for automobile storage. This preliminary work, of course, had to be performed in conformity with the legal requirements of the City's various bureaus for the convenience and safety of the general public and the tenants of the building.

Retention of Tenants. The building had a number of important tenants paying a yearly rental of approximately $300,000. No plan for altering the building could be wholly successful if it necessitated dispossessing the tenants, which it was believed would cost a large sum. In such case the owner would not alone have to pay this sum and lose more than a year's rental, but he would lose valuable tenants representing the motor industry, for which industry the building was to be erected.

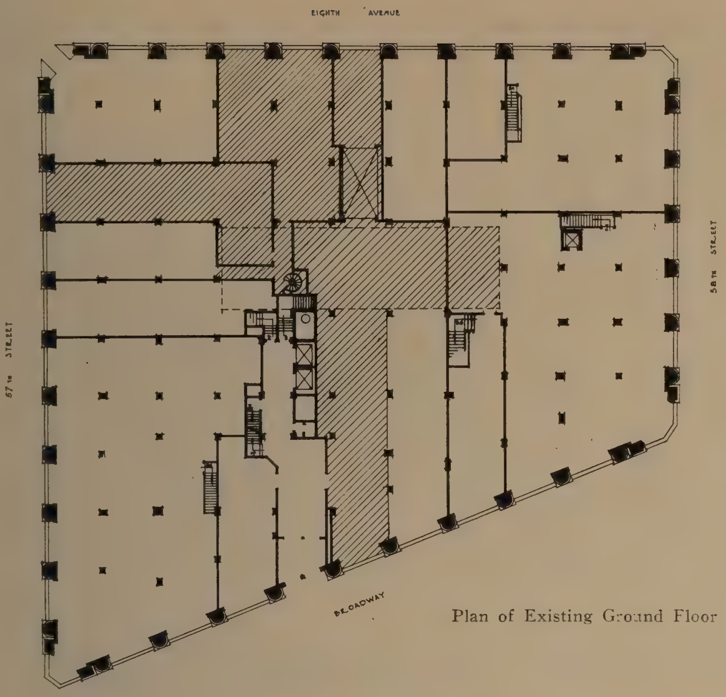
The present building has its Broadway entrance one bay south of the center and its elevators and other service facilities slightly southeast of the center. (See First Plan on Page 259). The architects seized upon the center bay for the new entrance and the center of the building for the location of the new elevator service. It was found that this floor area could be had for working space together with one bay on Fifty-seventh Street and three bays on Eighth Avenue, giving entrée to the building from three sides for the contractor's use, as indicated by the hatched portion of the plan.

Fortunately leases with two of the lesser tenants expired permitting a slight shifting or exchange of floor space with several of the remaining tenants, which accomplishment was an important factor in making it possible for the owner to execute this plan.

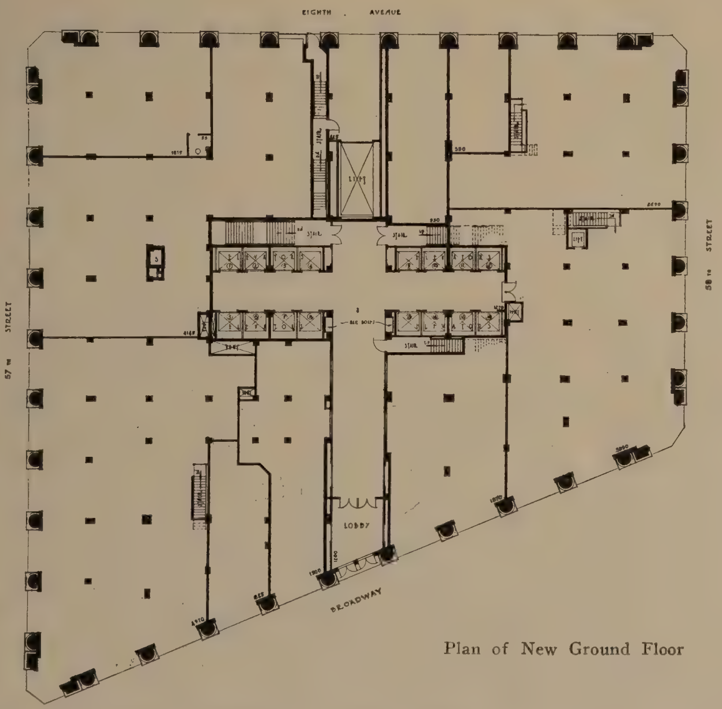


THE NEW GENERAL MOTORS BUILDING, NEW YORK

Shreve & Lamb, Architects
Drawing by Chester B. Price

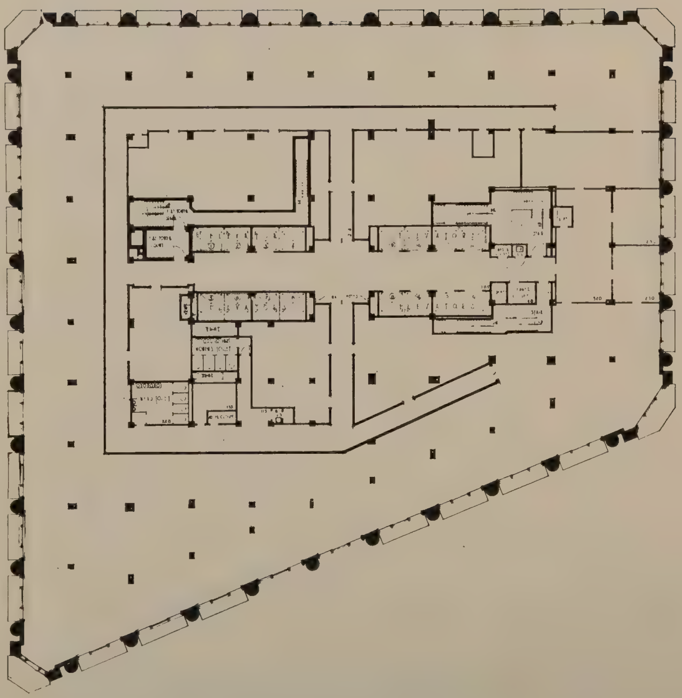


Plan of Existing Ground Floor

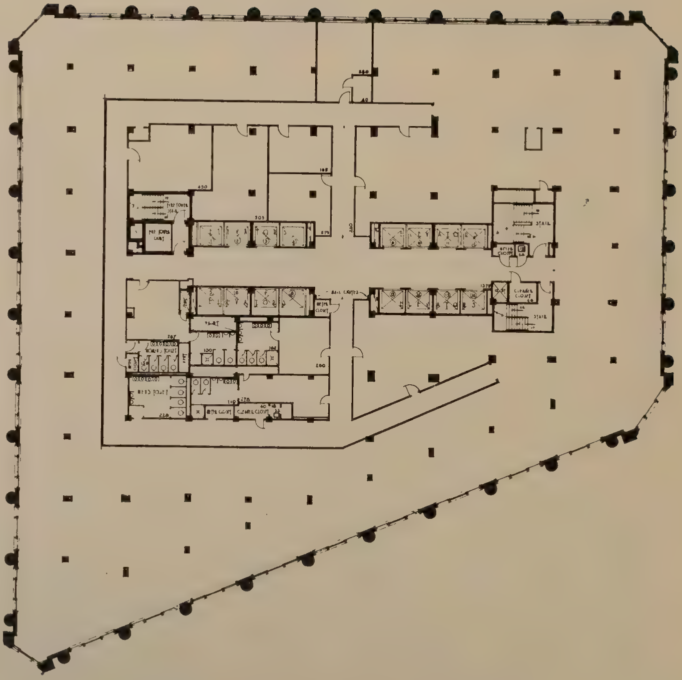


Plan of New Ground Floor

THE GENERAL MOTORS BUILDING, NEW YORK CITY
Shreve & Lamb, Architects

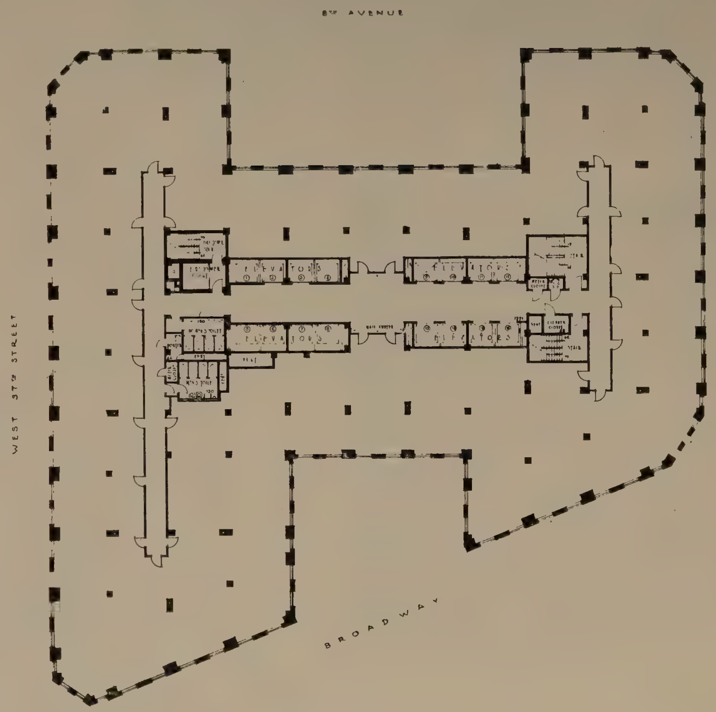


Plan of New Second Floor

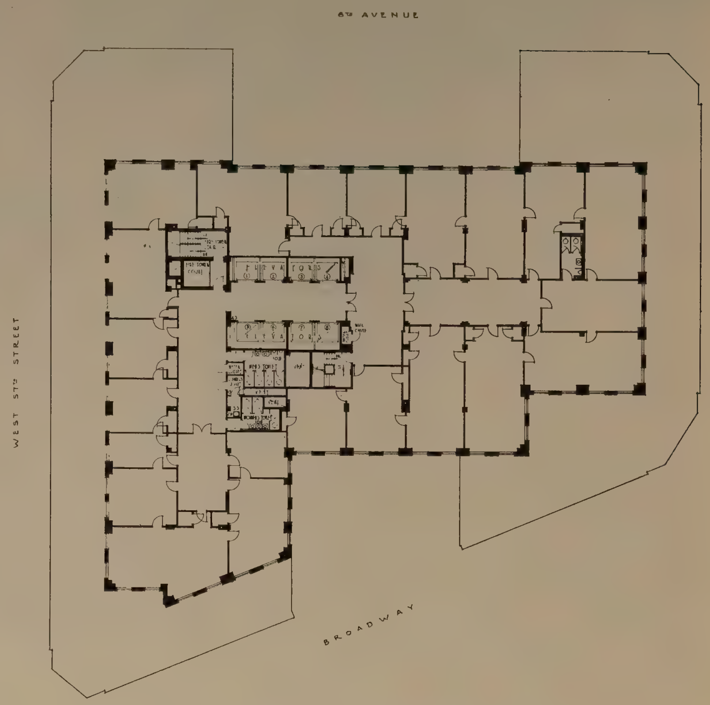


Plan of New Third Floor

THE GENERAL MOTORS BUILDING, NEW YORK CITY
Shreve & Lamb, Architects



Plan of Typical Floor



Plan of Twenty-third Floor

THE GENERAL MOTORS BUILDING, NEW YORK CITY
Shreve & Lamb, Architects

The seizing of the central portion of the building was not only important for the above reasons but it formed the basis of an extremely simple and economic plan. (See Second plan, Page 259). The centrally located Broadway entrance runs directly west forming a T with the elevator lobbies, with the elevators symmetrically arranged. The two service stairs to the north of the entrance lead to the second story and the broad stair to the south runs to the basement, thence westerly, connecting with the spacious arcade under Eighth Avenue which is being constructed in connection with the Columbus Avenue Station of the New Central Park West Line. The patrons of the building therefore will be able to reach this, as well as the present Interborough Station via the underground arcade, thus avoiding the dangerous street crossings at the Circle.

Reinforcing a Column

The entire frontage, 740 feet in length, remains unobstructed for show window space, save for the Eighth Avenue entrance where cars drive in and are taken to the basement for storage.

On the second floor (See Page 260) all the builder's operations are confined to the center of the building, leaving the tenants in the space outside of the hall undisturbed. The present toilets remain, also the other service facilities, except for slight rearrangement. This is true also for the third floor (Page 260). On this latter floor, however, it was decided to place the toilets and service rooms required for the employees. This is a departure from the usual arrangement by reason of the fact that the basement is used for automobile salesrooms.

Economic Requirements. It was necessary not only to maintain the present structure and to retain the tenants and provide for their needs and safety during the trying period of construction, but it was necessary to plan a building that would pay. The owner stood willing to expend a huge sum of money provided he could be shown that the plans called for sufficient rentable space to make the project a financial success. To find the plan best adapted to the site was therefore of the utmost importance.

We have already mentioned the change from the original U to the H plan. We must ascend to the typical plan to understand the true significance of this decision. (Page 261). We observe the elevator lobby with the service stairs at its north end and the toilets and fire tower at the south end, the minimum of hall, the absence of waste space and the row of well lighted rooms facing on a perimeter of light 880 feet in length.

At the eighteenth floor where the setback takes place, the H disappears, also

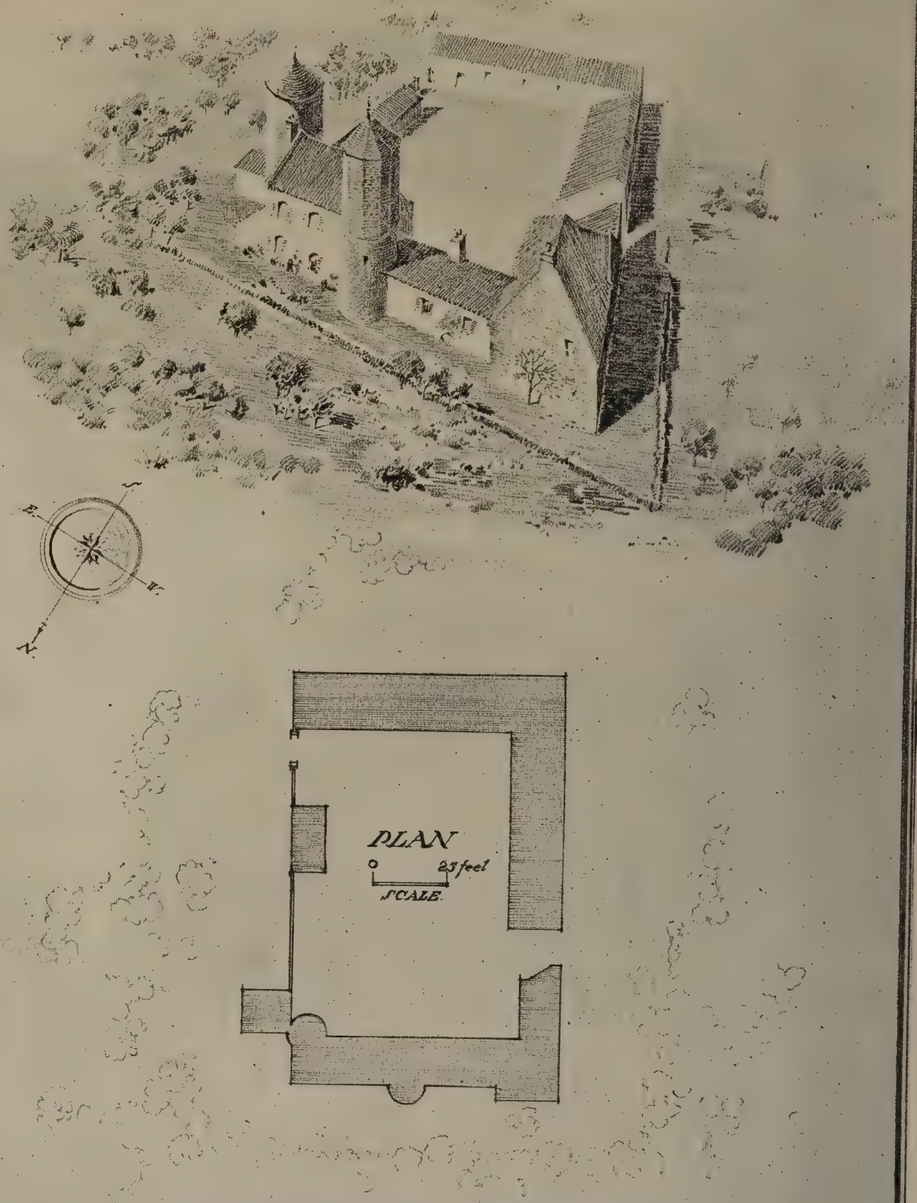
WORKING UNDER DIFFICULTIES—THE NEW GENERAL MOTORS BUILDING

the northerly bank of elevators. (Page 261). This, together with several of the larger typical floors, is the future home of The General Motors Corporation. All of the space which it will occupy has been planned with special care for its need.

Simplicity is perhaps one of the most difficult elements of design for the student to grasp, although every seasoned designer appreciates its value in both plan and elevation. The experienced eye needs but a glance at these plans to asrecognized that the problem has been solved, for here is simplicity and economy of space. The plot is amply filled, yet each room has sufficient light. If this building spells not financial success, the fault must perforce lie, not in the plan, but in one or more of the other elements which the promotor must consider in the construction of a great business building.

It is evident, however, that the owner has considered all these elements. The plot, in the center of the automobile district, has a floor area of nearly 33,000 sq. ft. and the building will have a rentable area of 550,000 sq. ft. The General Motors Building Corporation is to occupy the entire upper thirteen stories with 200,000 sq. ft. at an annual rental of $700,000. The lease extends for a period of twenty-one years and the total rental cost will amount to nearly $15,000,000, which is said to be the largest lease ever made for office space. The securing of this lease by the syndicate was indeed the determining factor in proceeding with the building.

Many of the readers of the Record, however, would not be interested in tenants, floor space and rental values were it not for the fact that the economic element is the controlling one in the consideration of a business building; but it is hoped that all who scan these pages will be interested to see how the firm of Shreve & Lamb took hold of an existing building, entered its basement filled with cars, plumbing and heating pipes and the usual basement facilities and laid the foundation for a new plan which admirably adapted itself to the plot and greatly increased its rental value, retaining the while 85% of its valued tenants.



LES TOVRELLES - ECHINGHEN

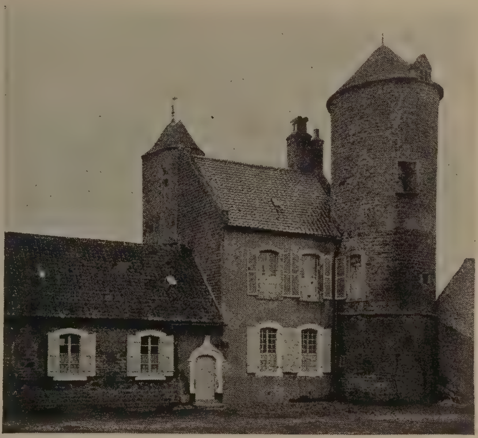
The FARMSTEADS *and* SMALL MANORS OF FRANCE

By

Harold Donaldson Eberlein, Roger Wearne Ramsdell and Leigh Hill French, Jr.

X. Les Tourelles, Echinghen, and a Small Manor Near Lisieux

The farm of Les Tourelles, at Echinghen, was once used as a shooting box by Louis XV. and was doubtless then in a more engaging state architecturally than it is now since the hand of the renovator has left its fell mark upon the fabric. It is discouraging to look at the windows, for example, and then think what the courtyard front of the dwelling might have been if only the obsession for "improvement" that so often seizes upon the provincial Frenchman had been withheld. The doorway gives some indication of what the courtyard façade once was. The group in its entirety, despite the many mutilations it has suffered, still bears a distinguished aspect.



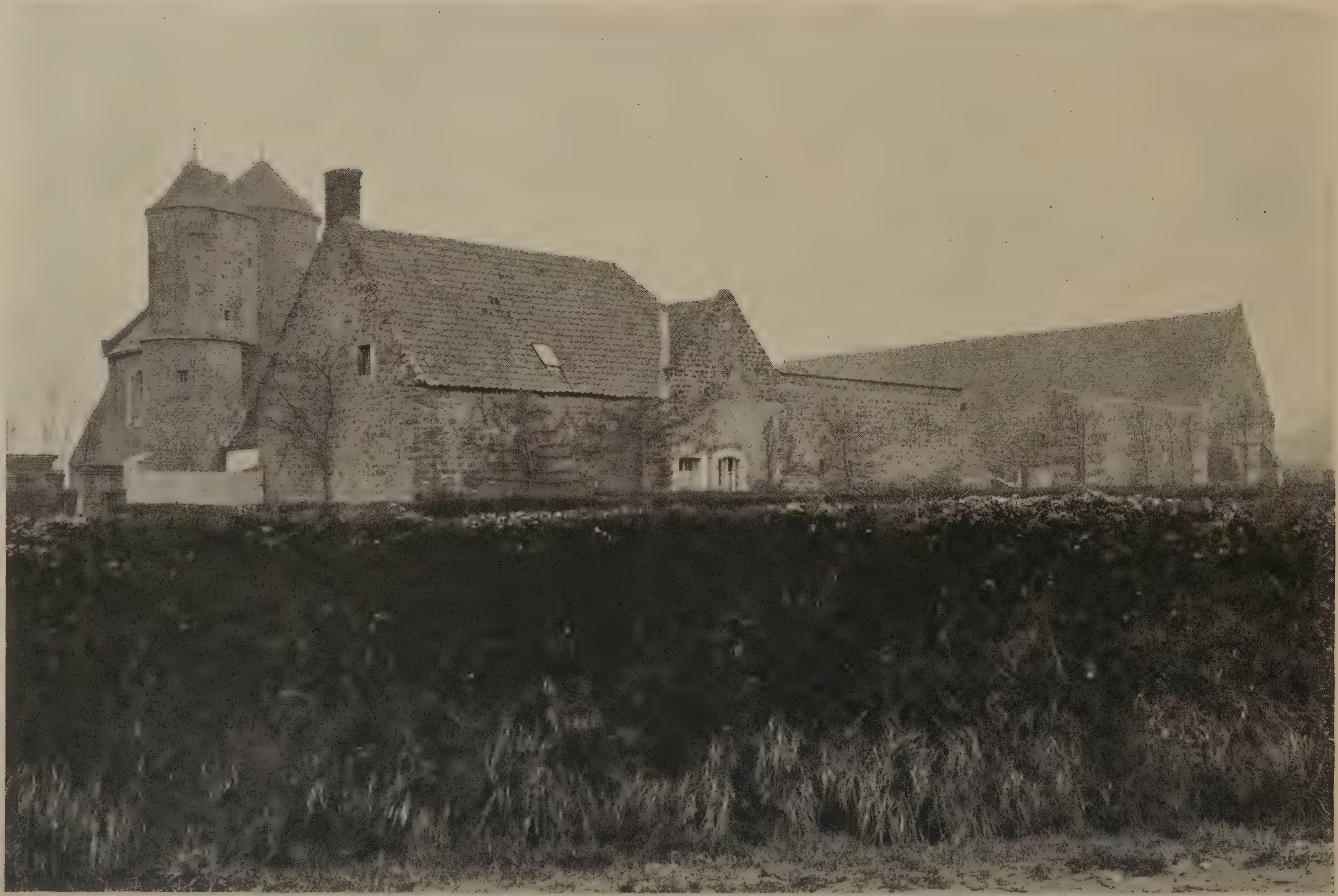
LES TOURELLES, ECHINGHEN

The most striking characteristic of Les Tourelles, of course, lies in its two towers with conical tiled roofs. The larger tower is circular for its whole height while the second, curiously enough, is circular for its first stage, which is built of stone, and then becomes polygonal in its upper stages, the material changing to a dark red brick at the same point with the change in shape. Otherwise, the material of the group, save for an expanse of recent stucco on the house front, is almost wholly the native limestone laid in the local characteristic fashion, although all the chimneys are of brick, with occasional brick repairs in stone walls, and in the gable end of the long barn there is an area of weather-boarding, a material not largely employed in this region. A few of the old roofs, with small thin reddish tiles, still remain untouched, but most of the roof surfaces have been recovered with new tiles that cannot begin to compare with the old in regard to either color or texture.

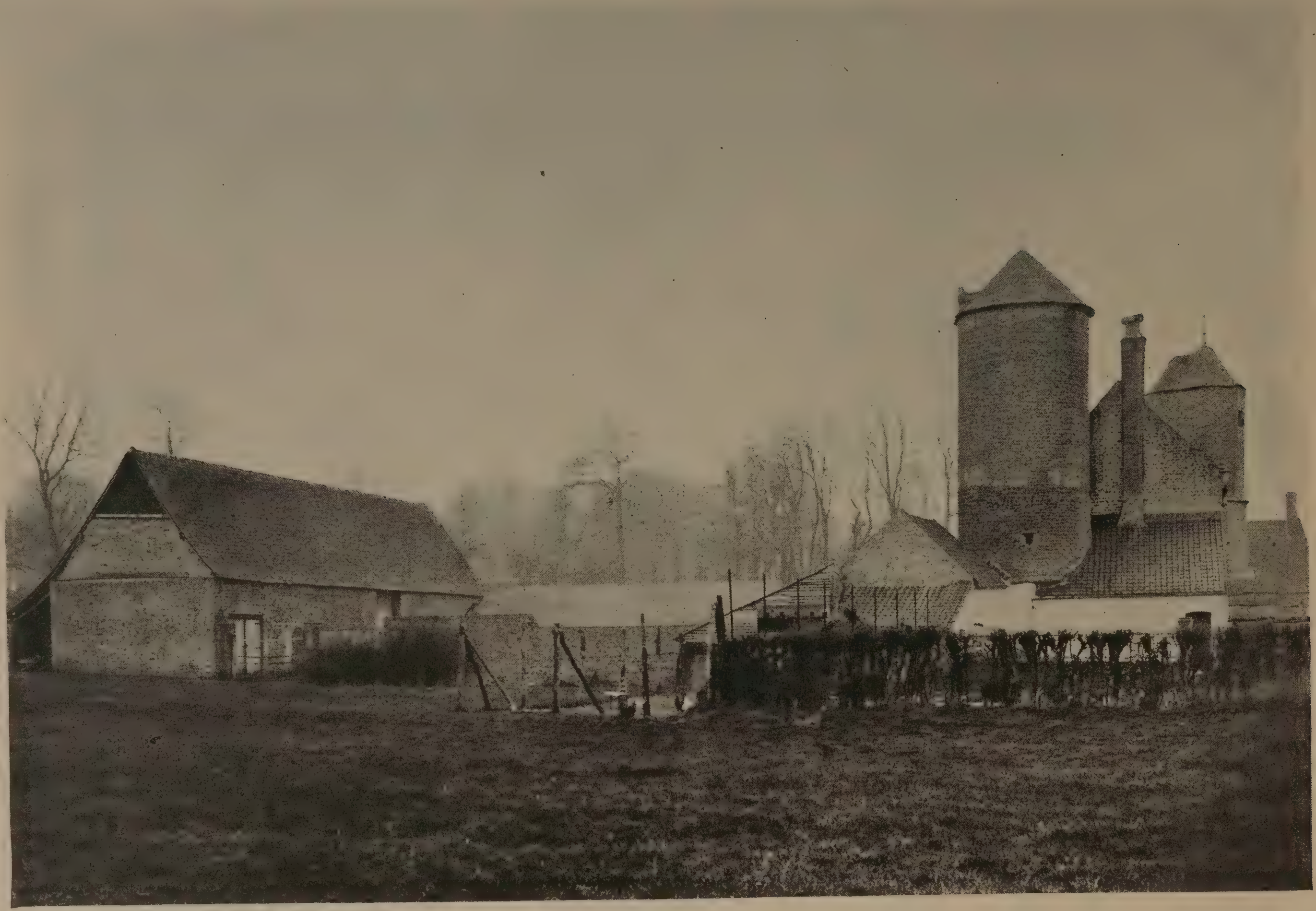
Viewed as a composition, Les Tourelles is typical of the traditional vernacular manner and but for the *potager,* whose disappearance is much to be regretted, is complete in the customary appointments.

Of an altogether different species and quality is the little fifteenth century manor house near Lisieux, published in company with Les Tourelles. The traditions embodied in its structure are those of a different part of the country, and its appeal is based on different grounds.

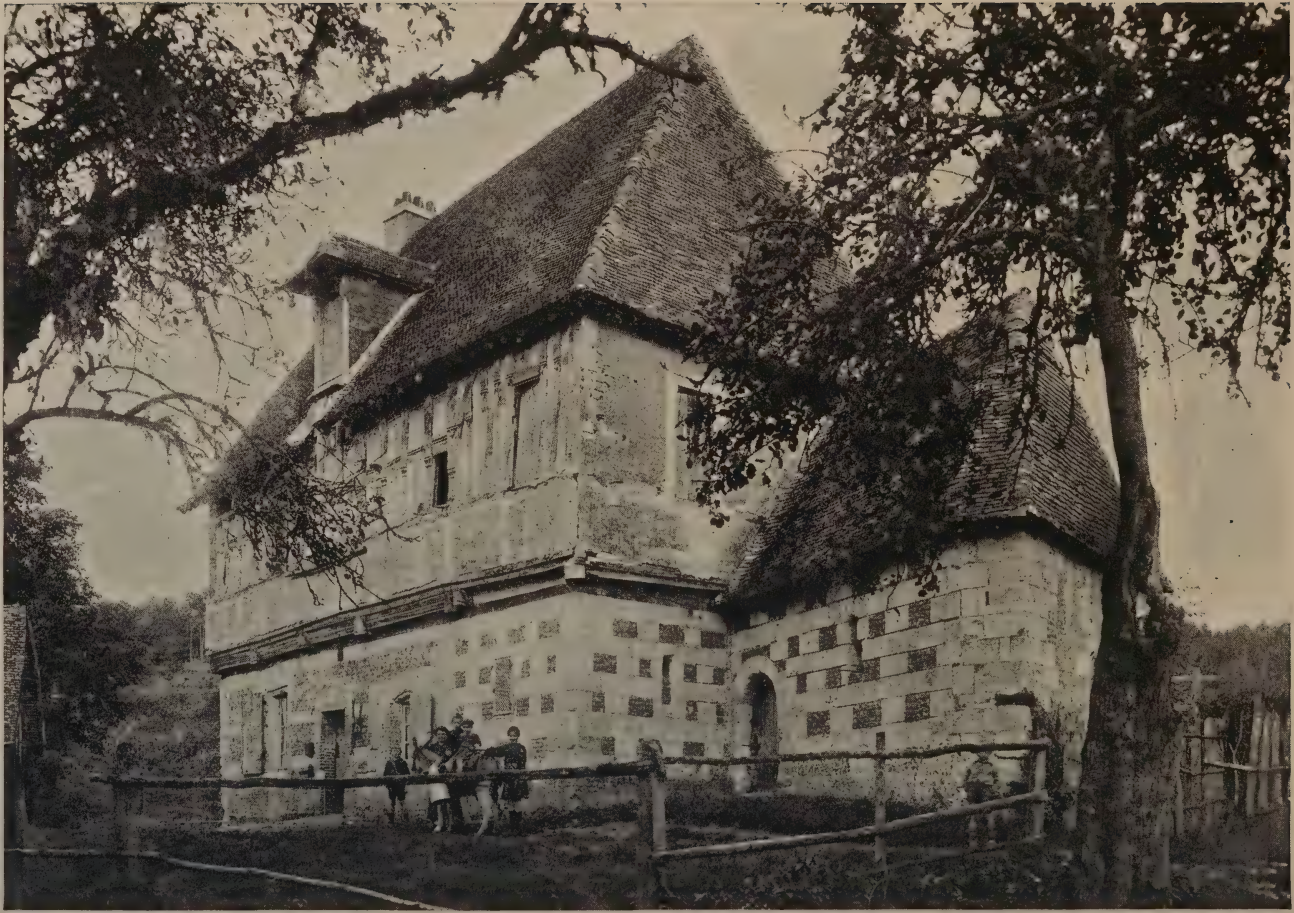
The walls of the ground floor are built of the native limestone while the upper story is of half-timbered construction with an overhang which is continuous all round the structure, save in the case of the low projection at the west. The chequered ef-



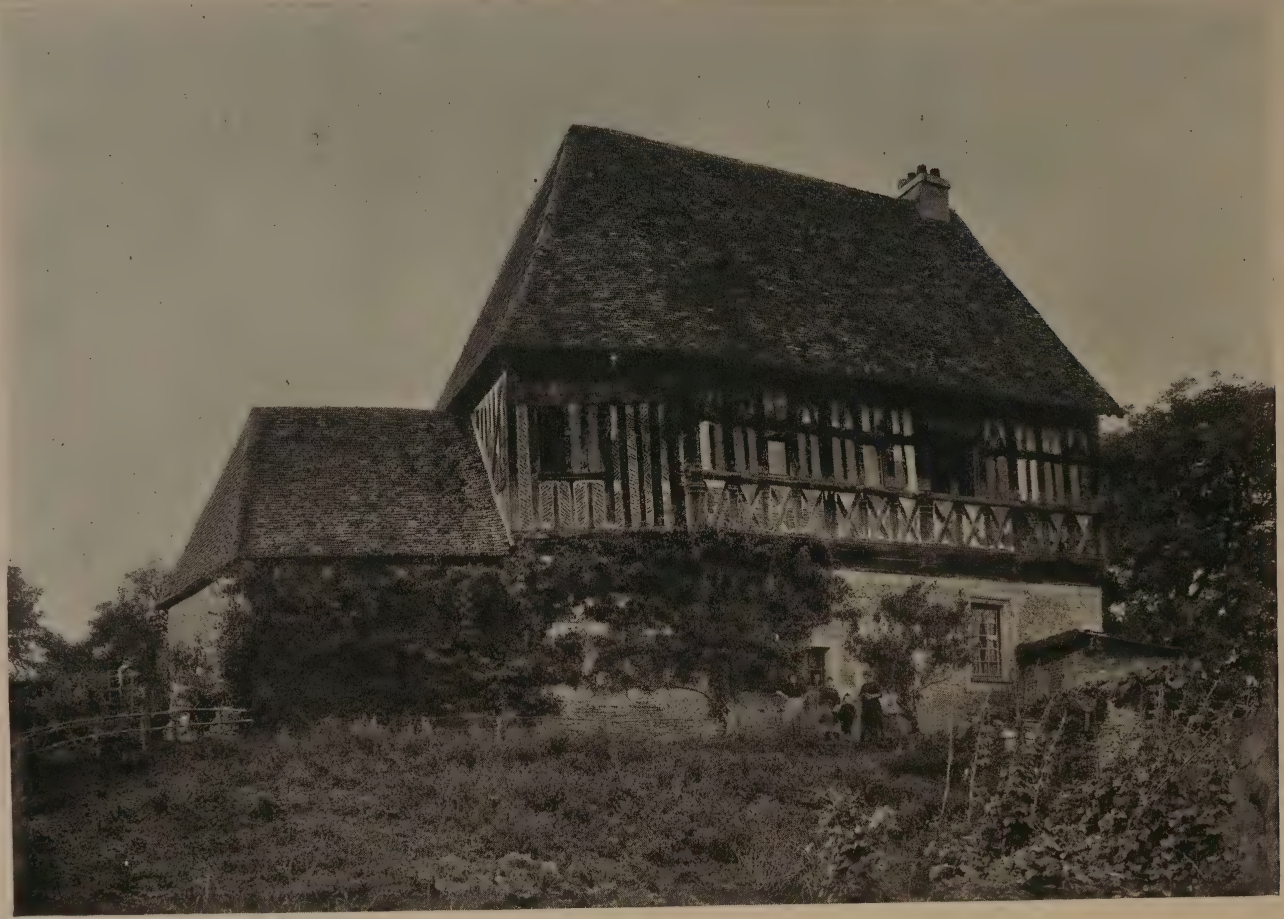
Farm Group from Northwest
LES TOURELLES, ECHINGHEN



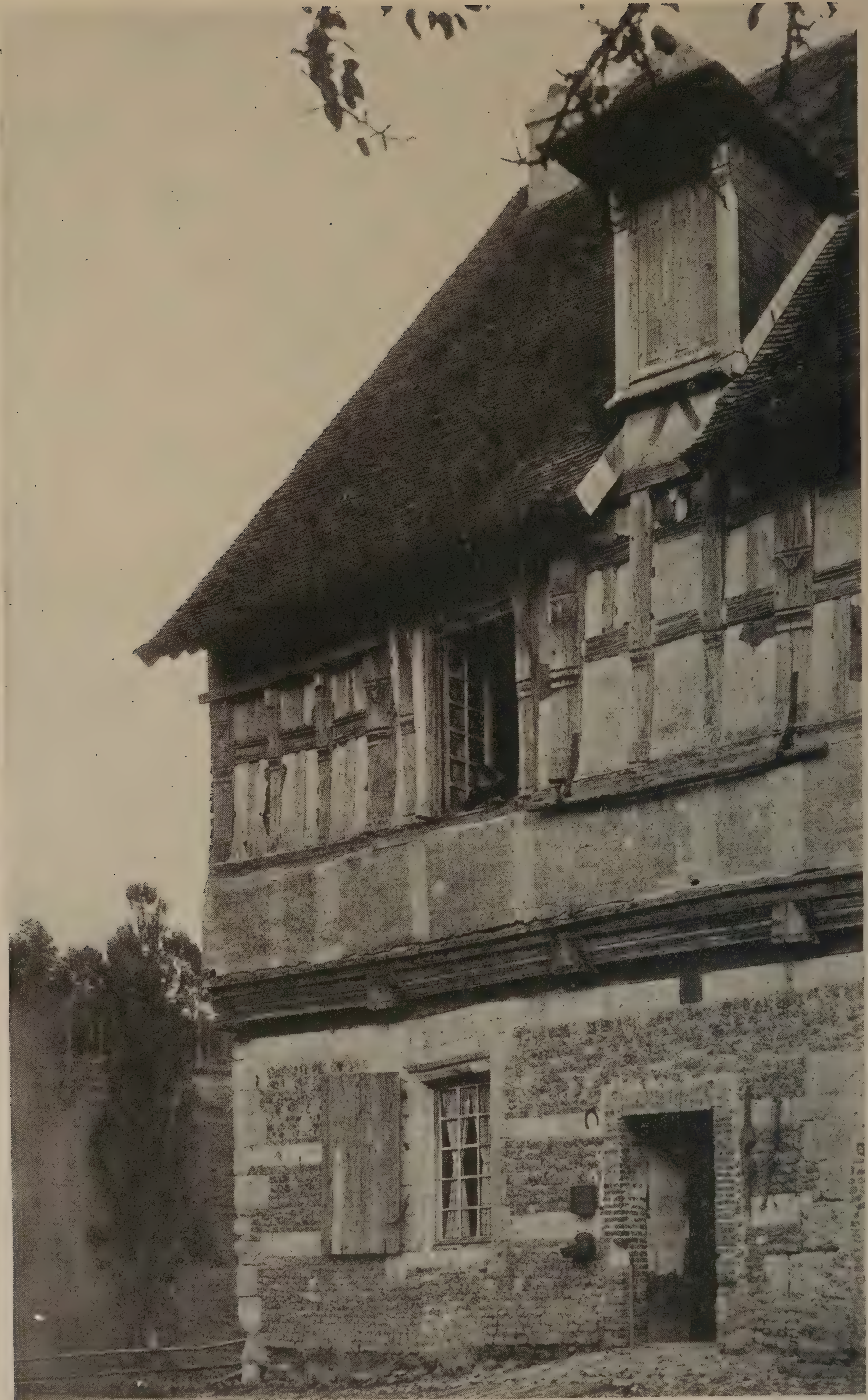
Farm Group from East
LES TOURELLES, ECHINGHEN



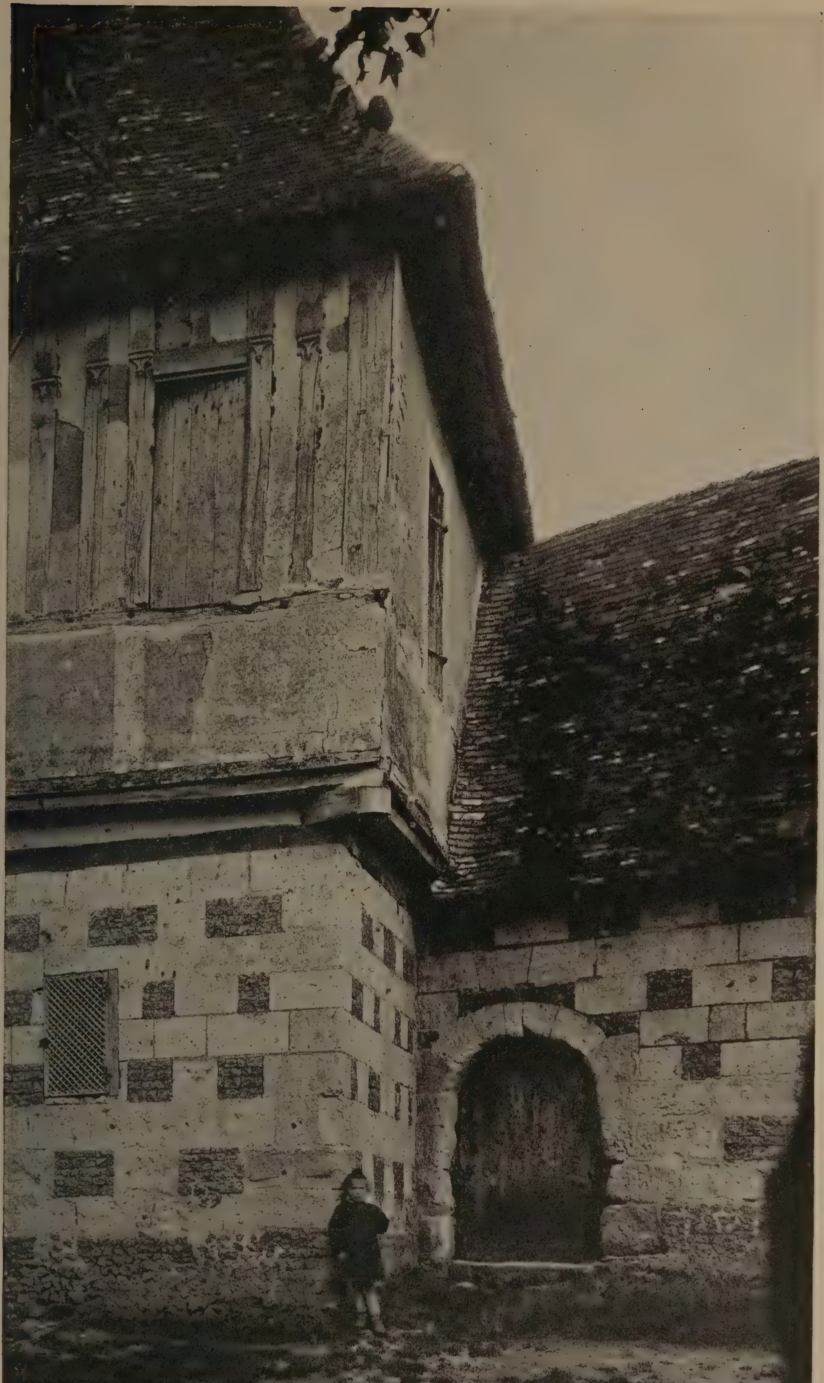
West Front
MANOIR TORDOUET, NEAR LISIEUX



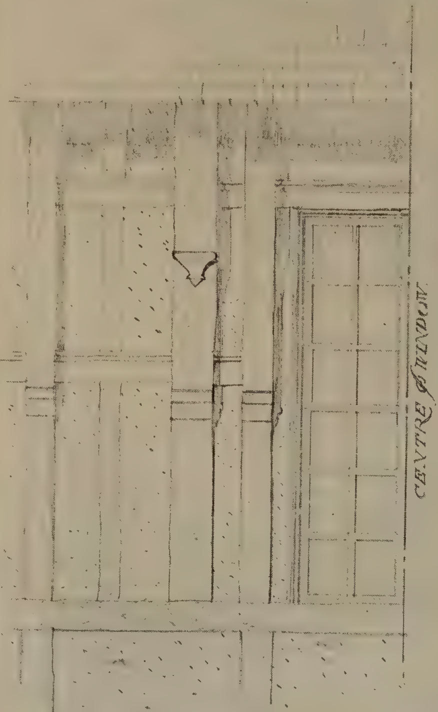
East Front
MANOIR TORDQUET, NEAR LISIEUX



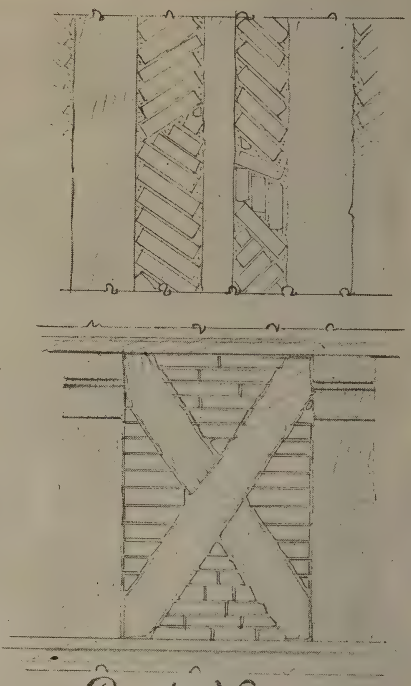
Northeast End
MANOIR TORDOUET, NEAR LISIEUX



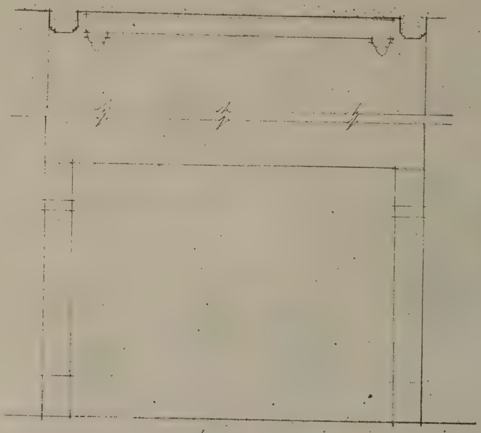
South Door, West Front
MANOIR TORDOUET, NEAR LISIEUX



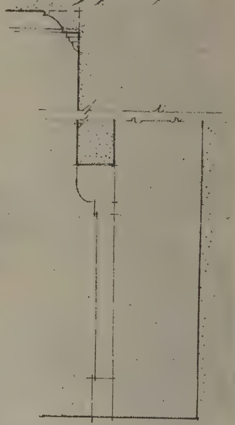
Detail of Timbering.



Brick Nogging.



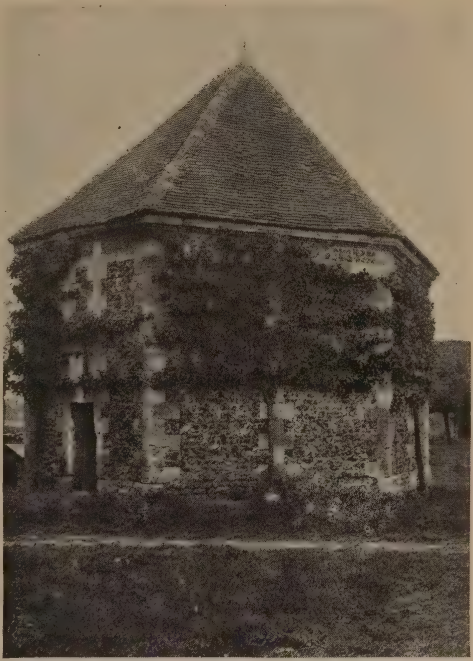
Fireplace
Manoir Jordouet



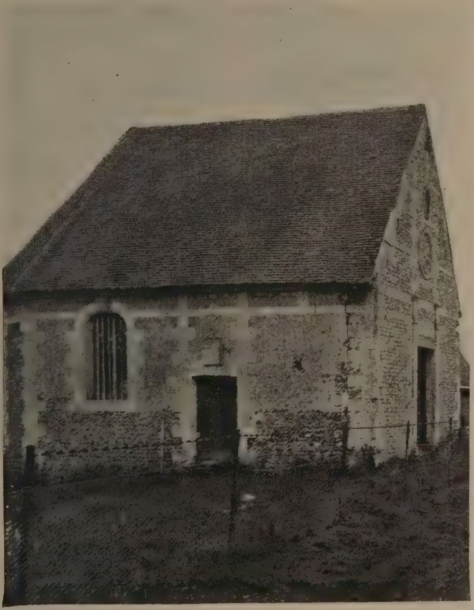
Section

fect of the western end of the house is produced by the introduction, in the alternate courses of ashlar, of rectangles of roughly squared small blocks of the same limestone, thus producing a most curious contrast by the form of the units and not by difference of material. On the north front the panels between the carved oak timbers are stuccoed while the corresponding spaces on the south front are plugged with bricks, some of them laid horizontally, some of them herring-bonewise. The steep-pitched roof is composed of thin little reddish tiles, similar to those on the old portions of roof at Les Tourelles.

In the buildings of a dilapidated little manor, on the road from Evreux to Lisieux, the same materials are used, though with some slight variation in the method of their employment. In this case, while the roofs of the dwelling, the *colombier* and the chapel are composed of the thin red tiles before mentioned, the roof of the long half-timbered barn is of thatch.

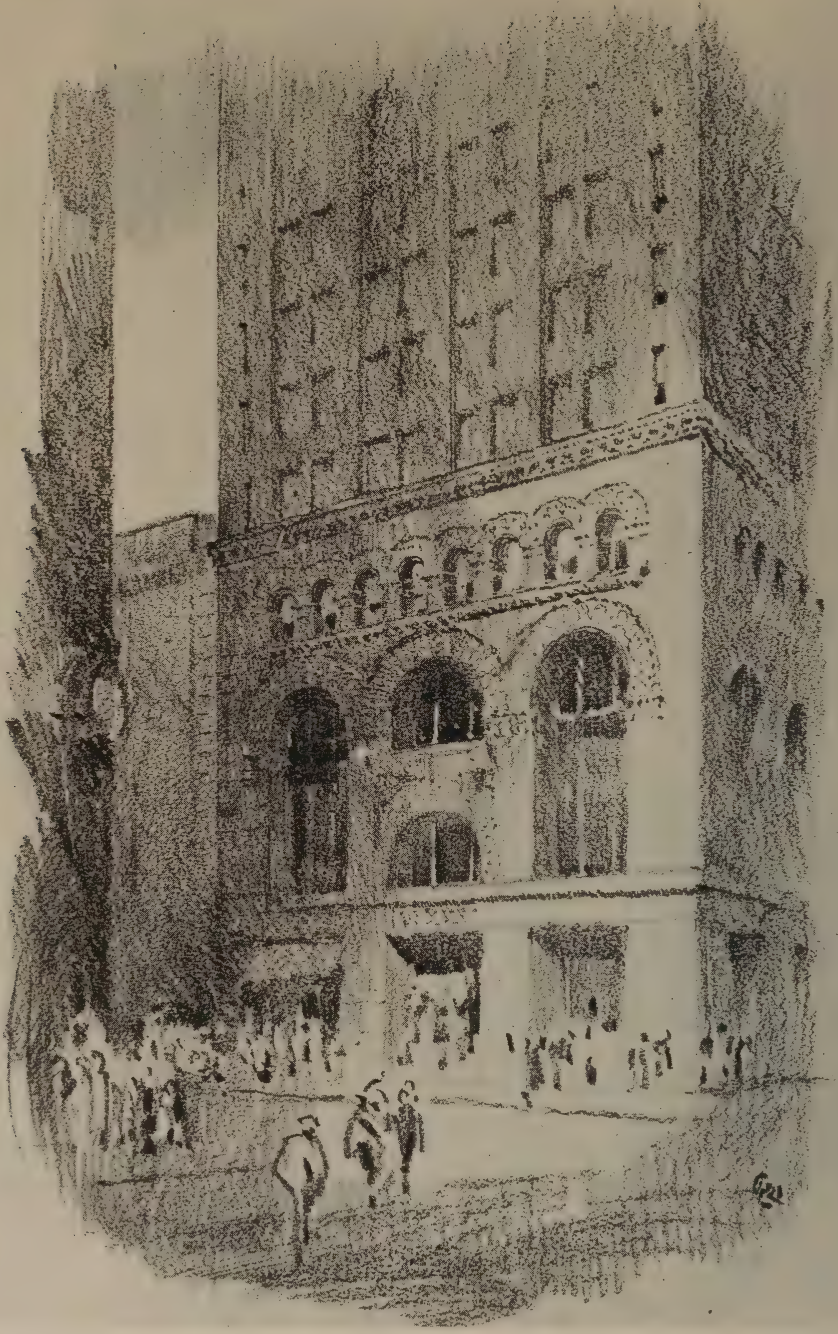


COLOMBIER—ON THE ROAD FROM EVREUX TO LISIEUX



CHAPEL—ON THE ROAD FROM EVREUX TO LISIEUX

Both of these houses with their dependencies well exemplify the fifteenth and early sixteenth century vernacular manner of building practised before the influence of the Renaissance methods had produced any appreciable effect on the lesser provincial architecture of France. Although the range of materials employed is comparatively limited, the variety of effect often produced shewed not only considerable ingenuity but an inherent sense of fitness and an appreciation of the nature of each material that entered into the fabric.



THE AMES BUILDING, CORNER WASHINGTON AND COURT STREETS, BOSTON
Drawing by Hubert G. Ripley

BOSTON DRY POINTS

By
Hubert G. Ripley

VII. Office Buildings of the '90s—Part 2

Until the Custom House Tower was built on top of the old Greek temple which formerly sheltered Bancroft and Hawthorne, the Ames Building was the tallest Boston structure. It is a most distinguished building, thirteen stories in height, built of Indiana limestone. Its walls, like those of the Exchange Building, are massive and self-supporting. It was, in a way, the swan song of the Romanesque Revival of the 'eighties. This style possesses great virility, however, and seems to be in favor again now.

In mass, the Ames Building is imposing, and in detail, it shows a strong Richardsonian flavor. It is the work of Shepley, Rutan and Coolidge, successors to H. H. Richardson, who, when the building was designed, still retained in their employ men who had helped make the Old Office famous. Among these men may be mentioned Dick Schmidt, Louis Mullgardt, Ed. Maxwell, Brown, and a number of others whose names have escaped us for the moment. At the present time, Dick Schmidt is one of the big architects of Chicago; Maxwell and Brown, with the higher-ups of Montreal, and Louis Mullgardt, that gentle, sprightly, lovable genius than whom no more joyous and fascinating companion, associate, friend and counsellor could be imagined, is holding up the oriflamme in San Francisco. When Louis designed the Fisheries Building for the Columbian Exposition of 1893—(H. I. Cobb was the architect whose name was appended to the drawings, but in conception, plan and detail the work was wholly Mullgardt's) he became a national figure, as that building was and is still generally considered one of the outstanding achievements of a notable group.

Then Louis, after a sojourn in St. Louis, where he shortly had Eames and Young groggy, so that they had to send out S.O.S. calls to New York, Boston and Chicago, made an extended stay in London, completely upsetting the traditions of Norman Shaw and paving the way for Harvey Corbett twenty years or so later. One of his recent achievements, subsequent to his brilliant success at the San Francisco Exposition, was the designing of a most remarkable bridge ten or twenty miles long, crowned with an amazing array of scintillating buildings of all kinds, a vast city of one street that soars loftily above the foam-tipped waters of the Hellespont that separates San Francisco from Berkeley or Oakland or some place or other. To our mind, Louis Mullgardt was one of the first of the "moderns" and the greatest of pontists. He busted tradition wide open in the early 90's and has been playing with the pieces ever since.

It is not surprising, with such a personnel as this guided by the Richardson tradition and the finely tempered genius of Charles Coolidge, that the Ames Building is one of the outstanding monuments of XIXth Century American Architecture.

We didn't think so in the old days, for then there was great rivalry between the leading offices, and while, as individuals, the draughtsmen of the various firms were most friendly, officially each considered the work of the other as paltry stuff. Today, a broader view prevails and there is much better team work all around. It is realized that Parnassus may only be stormed by serried ranks of shining hoplites struggling valiantly through the fogs and mists of the welter of plagiarism that obscure its radiant summit.

In detail the Ames Building is rich in a splendid variety of calathriform stone carvings, equally a tribute to the skill of John Evans who modelled and executed them, and to the genius of their designers. The great arches of the lower stories are recalled at intervals and there is a refreshing lack of repetition that is rarely seen in the so-called classic or Renaissance office building. The Ames Building is Romanesque without being archeological.

There is a fine monumental marble staircase that has an interesting slant due to the inequalities of the lot lines. It is brilliant in golden mosaic (there are silver treads among the gold), reminiscent of San Miniato and the Capella Palatina, and a constant thorn in the flesh to real estate men who hungrily begrudge a single square foot of unrentable space. It is a source of great pride to the owners and tenants, however, and amply justifies itself, even though it be rarely used. The Ames Building, as well as the Exchange Building, has never lacked for tenants of the highest standing, which is a more substantial tribute to their designers than the approbation of realtors.* The offices are light, airy, and flooded with sunshine, and the top story, since the building's completion, occupied by its architects.

Every big office possesses at least one faithful draughtsman who, as tradition goes, was found one frosty morning on the doorstep, taken in, nurtured and became a permanent fixture, like the first specification on which all subsequent specifications are based. In Shepley, Rutan and Coolidge's office this draughtsman was named John J. Ray Mulcahy. At the time of the construction of the Ames Building, Mulcahy had become extremely adept in the making of full size details. In fact, that was his chief and only occupation in the office. Full sizing an ordinary building was nothing in his young life.

He occupied the first coop in the great draughting room, with a table so long and wide that it would take the full size detail of the largest cornice ever designed in the 'Nineties, and there were giants in those days. John J. would start in the morning with a 500 pound roll of detail paper, begin to draw at one end, and by night time, the full size details of an ordinary building would be all done, and the roll of paper shrunken to a few scraps suitable only for wrapping boxes. It it were a large building, it sometimes took two or three days and two or three rolls of detail paper, but his usual ration was one roll a day.

It took a large force of draughtsmen to keep Mulcahy supplied with material, and he was an extremely valuable man, doing the stint of a dozen ordinary detailers. He did his work with great skill and thoroughness, for while contractors were frequently raising questions on the scale drawings made by the best draughtsmen in the office, sometimes finding tiny little errors therein, it is not in the memory of man that anybody ever caught Mulcahy in a mistake.

Eddie Wait, who lives in Winchester now, enriching the town-beautiful with attractive domestic architecture of moderate cost, and only comes to the city on occasion (a Horace-Vitruvius-on-his-Sabine-Farm, as one might say) was, for a number of years, one of the staff of the Old Office in Exchange Street. The memories of youth are precious to Eddie and he recalls them with vividness, especially in sympathetic company when there is a bit of "juniper and orange juice" to help along the conversation. We are indebted to him for the details of the following distressing incident.

Louie Simon, whom we knew at Tech as a short, plump, rosy-checked boy, and who is now a member of the credentials committee and presiding Argus at Institute Conventions where his dignified, austere presence at the registration desk lends impressiveness to the ceremony, was once a cub draughtsman at $10.00 a month for Shepley, Rutan and Coolidge.

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*Gordon Allen, who spent year before last in Spain, and who ought to know, tells us that "Realtor" is derived from two Spanish words, "rèal," meaning royal, and "toro" (tor for short), meaning bull.

One morning he was inking in the first floor plan of the Chicago Public Library. It was a large ¼″ scale drawing about four feet by six feet and Louie was stretched out flat on the drawing board *ventre-à-terre,* if one might be pardoned a misuse of the phrase. It was the custom at that time to use different colored hectograph inks, a most pernicious, vulgar and altogether damnable custom, subversive of all the niceties of architectural practice. Happily the custom has had short shrift in Boston.

Louie was hard at work amongst his ink bottles when, happening to glance up he saw Shepley approaching. Shepley was a tall spare man, always faultlessly dressed, very reserved, even distant on occasion, particularly so in times of excitement, when he immediately became frigid. Feeling his position on the drawing board might be considered undignified by the Boss, Louie started to slide off as quietly and quickly as possible.

Old "Socrates," for many years Sergeant-at Arms in the office of Shepley, Rutan and Coolidge, sketched in after life by A. B LeBoutillier.

The drawing board wasn't properly adjusted on its trestles for this manoeuvre and started to slide too, so that Shepley's arrival opposite Louie was beautifully synchronized with the collapse of the drawing table. The hectograph inks were catapulted to the ceiling, coming down again almost immediately, be-spattering the Boss with a terrible mixture of green, red, blue, brown, and purple splotches. Shepley said no words, his expression never changed, barely pausing he walked silently from the room leaving poor Louie shattered in spirit, in utter misery and desolation.

There was an organization among the draughtsmen in the office known as the Five Nations, representing the Great Tribes of Cherokees, Creeks, Seminoles, Choctaws, and Chickasaws. A grand Sachem presided at gatherings and festivals. The costumes consisted largely of cover cloths from the draughting tables, feather dusters for head gear, and Windsor and Newton's water colors for war paint. Old T. squares with one arm gone made fine tomahawks. Whenever all the Bosses were away at the same time, for the afternoon say, a festival was ordered by the Grand Sachem. The Tribes gathered and plans were laid for the various ceremonials which were always carried out in strict conformity to the old traditions that were handed down in their entirety from the days of H. H. Richardson himself.

Certain new features were introduced from time to time and one of these which proved extremely popular, was largely the creation of Eddie Wait. One Saturday afternoon when everybody was supposed to be working overtime, the firm being absent, there was an announcement by the Grand Sachem: "Gentlemen, we will now have the Te Deum." Immediately there was a rush to the far end of the room and a procession was formed of the Five Nations in full regalia. First came the leader, holding aloft the longest T square in the office; behind him came Eddie Wait with the city directory, on either side two men with lighted candles, the chorus consisting of the remaining men in the office, with the exception of a few conscientious souls, followed in double file, with cover cloths draped like cowls over their heads. Eddie had the directory open at the page of Mulcahy's and in Boston, as everyone knows, there are many of that name. The procession moved slowly and majestically down the long aisle between the coops, toward the front office, Eddie intoning the Litany in a low, deep voice, reading the names from the book:

Eddie—"From Albert J. Mulcahy, sign painter, 216 Fifth Street, South Boston—Good Lord deliver us!"

Chorus: *(da capo)*

Eddie—"From Annie M. Mulcahy, widow, 29 Dix Court, Dorchester—Good Lord deliver us!"

Chorus: *(da capo)*

Eddie—"From Bridget A. Mulcahy, dry goods, 1019 Main Street, Charlestown—Good Lord deliver us!"

Chorus: *(da capo)*

"From Cornelius J. Mulcahy, plumber—

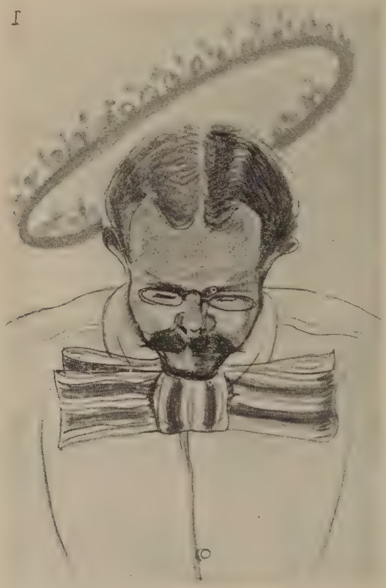
From Francis X. Mulcahy, physician—

From Gertrude C. Mulcahy, seamstress—"

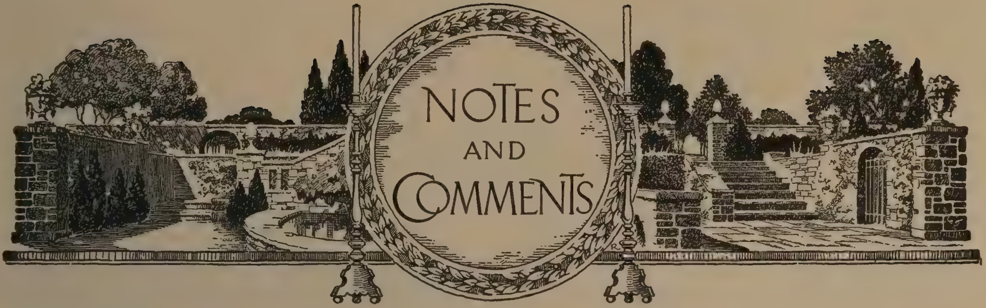
After each verse, the chorus would repeat the lines in solemn recitative, gradually swelling in volume to a maestoso movement as the procession reached the end of the room. When they arrived opposite Mulcahy's coop, the chant had reached the proportions of an Oratorio in full cry. Spurred on by the Grand Sachem, everybody gave the full strength of their lungs to:—

"FROM JOHN J. RAY—HAY! MULCAHY! DRAUGHTSMAN,
GOOD LORD! DE—HE—LE—
HIVER! !—RUS! ! !"

The cacophony fairly shook the walls of the old building, causing truck horses to shy on Exchange Street and timid souls to falter on their way home. It was a very splendid and inspiring effort, thrilling everyone to the core. John J. gave no sign, but kept right on with his work, never missing a dentil or an astragal. Sic itur ad astra.



JONE—PENCHANT FOR CRAVATS



NOTES AND COMMENTS

The Traffic Congestion in Manhattan

The Mayor of New York, Mr. Walker, has recently appointed a large advisory committee, consisting of some hundreds of eminent citizens, and assigned to them the laborious and difficult task of telling the municipal government what to do in order to cure the intolerant congestion which now afflicts all kinds of transit and traffic in and out of the Borough of Manhattan. It need scarcely be added that these eminent citizens are wholly incapable of performing the job. The preparation of a plan whose execution will do away with the impediments to the movement of people and goods in Manhattan is a technical matter which can only be handled by traffic engineers and city planners. Of course Mayor Walker is fully aware of this fact. He does not expect the advisory committee of eminent citizens to devise a plan. What he hopes that they will do is to endorse and give prestige and authority to a plan which the experts will devise and by so doing help to overcome the obstacles to its execution.

Those obstacles seem to be almost insuperable. The provisions which were made for the movement of traffic in and out of Manhattan were inadequate almost from the start and they have remained inadequate ever since. Manhattan is an island which is twelve miles in length and only a mile or two in width. The main streams of traffic on the island itself would naturally be longitudinal, but the original street plan of the Borough provided for twice as many lateral streets as it did for longitudinal avenues. This was the first grave mistake. Then the traffic from the island to the Bronx, Long Island and New Jersey always had to be provided for by special roadways and vehicles, and the provision made by private and public corporations has always lagged behind the demand. There has always been congestion. It existed on the busses, horse-car lines and ferry boats fifty years ago. It was continued on the bridges and the elevated roads, and recently it has been more than ever intolerable on the tubes and subways. No less serious, however, than the crowding of the subways is the congestion of street traffic. The latter will soon require drastic remedies which cannot be applied without enormous expense. The situation is really critical. The Mayor's Committee is in a sense a Committee of Public Safety. It will take heroic measures to prevent the congestion from aiming a fatal blow at the prosperity of the city.

In dealing with this problem in the past the city government has failed uniformly to show either energy or foresight. So far as the street traffic is concerned, various plans have been proposed to cut through additional avenues and streets, but with one or two exceptions they have all been defeated. The municipal officials have consistently acted or attempted to act on the assumption that their job was confined to taking care that enough subways, tubes and bridges were built to handle the increasing traffic, whereas what they should have done was to adopt some means also of diminishing the amount of traffic to be handled. The tendency of cheap and speedy transit was not only to distribute population but to concentrate business, and the concentration of business was, of course, also helped by the indisposition of the municipal government to limit the height of buildings. It is this policy which has gradually resulted in the present critical condition. It is necessary to build more subways to enable the workers to get to and from their places of employment, but it will be fatal to limit the remedial efforts to subway construction. Some means must now be adopted to distribute business as well as population.

Disinterested people who have studied the problem are all agreed upon the necessity of framing a plan to be carried out under public authority to move some of the business which is now being transacted in Manhattan to the outlying districts, and Mayor Walker has expressly approved the idea. But when the municipal officials start to put it into practice, they will meet with powerful and resolute opposition. There is a rich and influential group of interests which profit by the concentration of business in Manhattan, and after having been favored by the municipal government so long and so steadily, they will not abandon their existing opportunities and franchises without a stiff fight. They are not saying very much now, but as soon as any particular plan is proposed they will stubbornly and in all probability successfully resist it. The existing congestion cannot be either continued or cured without causing immense losses to individuals and business interests, and naturally all businesses whose toes are stepped on will do their best to stand out from under. It remains to be seen whether the Mayor's advisory committee will either agree upon a plan or, if they do, exert enough authority to brush aside the inevitable opposition to it.

HERBERT CROLY.

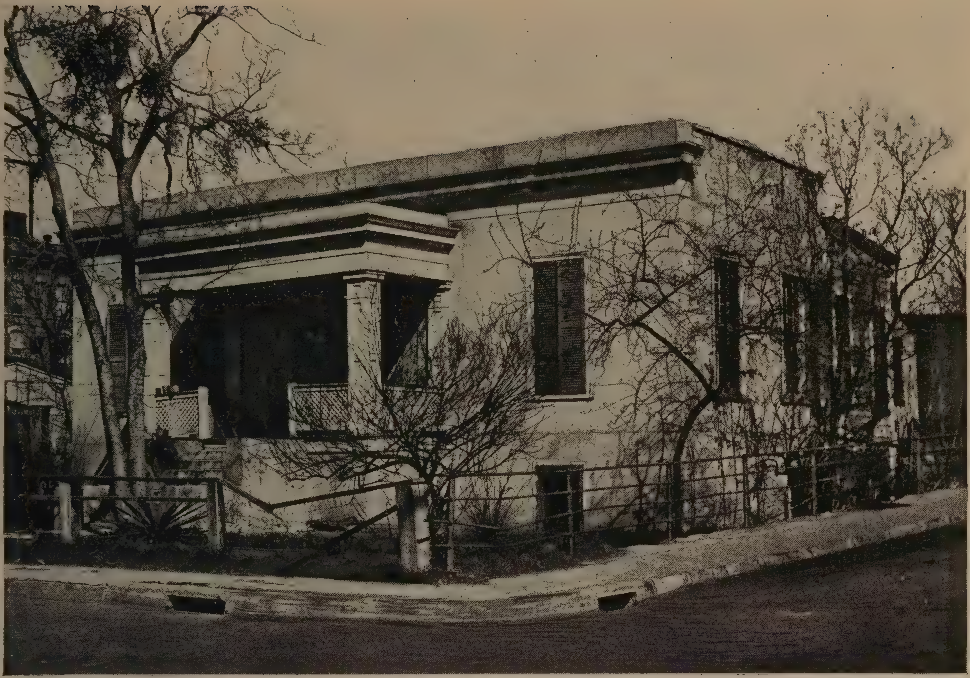
A Tolerant Profession

Comparing the architectural with other professions, we find it the most tolerant to outside interference. Is this a trait to praise or blame? There is little to praise in the indifference or weakness which tolerance suggests, as it allows a low grade of service which no other profession would tolerate. Suppose the President should appoint a banker to the Post of Surgeon General of the Army or a grocer as Surgeon General of the Navy? The doctors would instantly raise such a disturbance that the whole country would condemn such appointments as a menace to the health of soldier, sailor and citizen. The anticipation of such a protest would be sufficient to prevent a President casting such a slur upon the medical profession. While it is difficult to imagine a Chief Executive appointing an architect Chief Justice of the Supreme Court or a builder Attorney General of the United States, it requires no imagination to picture the results of such action. The lawyers would spring into life from one end of the country to the other. They would appeal to the people to protect themselves, or they would appeal to the courts to protect the people from such an imposition. This appeal would be so far reaching that the appointments would be recalled. It is easy to appreciate the storm that would blow like a tornado over the country if a realtor were appointed chaplain of the House of Representatives, or an actor chaplain to the Senate. Protests vividly depicting the dangers to be encountered by the body and the soul would be voiced from every pulpit of the United States. Our legislative bodies would hastily countermand such impolitic appointments.

While other professions are intolerant, the architects are tolerant. They did not oppose the appointment of an engineer as architect of the United States Capitol, an office that carries additions to or modifications of this historic structure and designs for many detached Government Buildings. They have raised no protest against an army officer having charge of alterations and additions to the White House, sacred to the laity because of its occupants, and to the architects because of the noted designers, James Hoban and Charles F. McKim. The architects have made no protest against a lawyer as supervising architect of the treasury, in other words a lawyer as architect for the United States.

The present Congress authorized an expenditure in the next five years of one hundred and sixty five million dollars for the erection of Government buildings. Fifty million of this sum is to be spent on the much needed buildings in Washington. The future generations of the world will judge our present culture by the character of these buildings. It is important that we should offer them our best. These buildings should be designed by our most capable men. The undertaking is too great for one man. In the interest of the public, architects should not tolerate the design by a lawyer and his staff, as it is the greatest opportunity for good architecture the country has been offered. For some unexplained reason, being tolerant, the American Institute of Architects has not raised its voice against this serious danger to their art.

The action of the Institute years ago under somewhat similar conditions of danger might be followed at the present time. Years ago the integrity and beauty of the Capitol and the White House were menaced by incompetent designers. Plans and models for the contemplated additions were made for the Capitol in the office of the superintendent of the Capitol, and for the White House in the office of Public Buildings and Grounds. Neither of these executives was an architect. One had become superintendent of the Capitol through the clerical force; the other was an Army officer detailed as superintendent of the White House. The models which they presented showed the unfitness of the proposed additions. As the doctors, lawyers or preachers would have done if the integrity of their profession were menaced, the Institute of that day became intolerant in action. They made a nation wide educational campaign through their chapters and local art and municipal societies. This intolerance brought protests from the



A HOUSE IN SAN ANTONIO, TEXAS

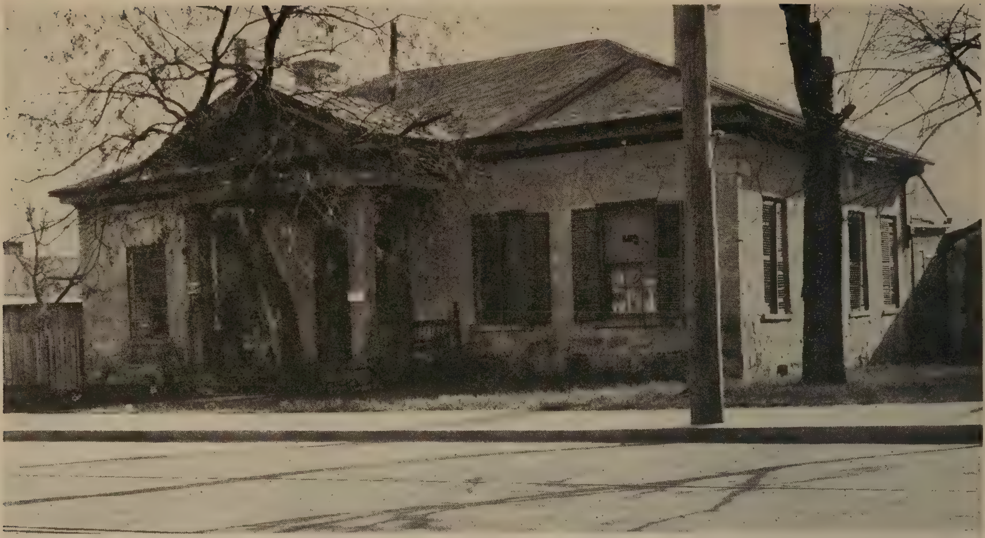
people against officials to which both Congress and the President paid attention. Good resulted in that the House and Senate offices and also the proposed extension of the Capitol were designed by Carrère and Hastings, a firm of standing, and the Restoration of the White House by McKim, Mead and White. Due to Charles F. McKim, the restoration of the White House was a most notable achievement, which let us hope will not be tampered with. In the early nineties the output of the supervising architect's office had become a reproach to the culture of the country. Aggressive men like R. M. Hunt, D. H. Burnham and John W. Root secured the passage of the Tarsney Act, 1893, and its enforcement under Lyman G. Gage, Secretary of the Treasury. This law placed the larger number of Government Buildings in the hands of selected capable architects. The effect of this act was a revolutionary improvement in the character of Government architecture. By the poor management of the architects and want of knowledge and foresight of the legislative branches of the Government, the Tarnsey Act was repealed, causing the character of Government architecture to again depreciate. It would be interesting to know why the Institute does not adopt the methods of its former successes. Let it cease to be tolerant and become intolerant and aggressive for the public good. Let it bring the importance of the subject to the attention of the people, through the press, through their fifty odd chapters and the two hundred and more chapters of the Fine Arts Federation. Let them interest all art and municipal societies. The people of the United States want the best architectural effort of the period. Let them understand the conditions and Congress will respond.

Glenn Brown.

A Group of San Antonio Houses Showing Classic Influence

There are to be found in nearly every city and town of considerable age in the United States buildings possessing architectural or historic interest which merit some sort of graphic record. Few towns are of sufficient importance to warrant the preparation of special volumes of such records and many are so remote that their interesting features are never even discovered and sooner or later disappear.

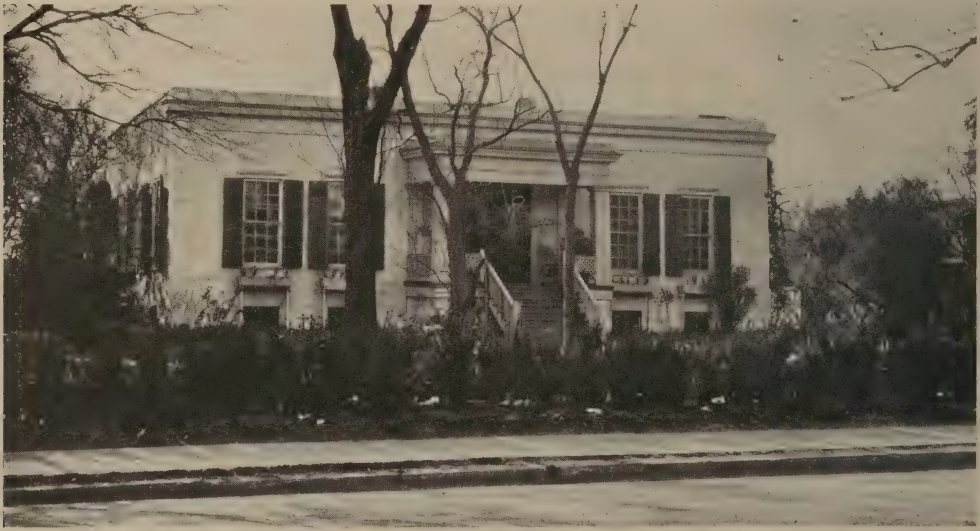
The architecture of New England has been well looked after, judging from the wealth of books, pamphlets and magazine articles devoted to Colonial architecture there, but unfortunately this is not true of the South-



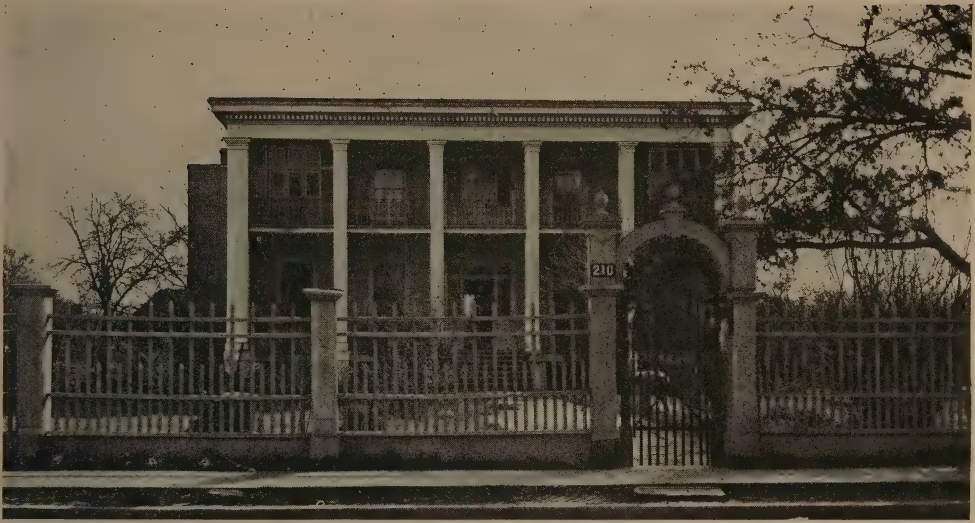
A HOUSE IN SAN ANTONIO, TEXAS

west. The city of San Antonio, Texas, is a case in point. The Alamo and the other missions which the Spaniards built two centuries ago are visited and photographed by every student of architecture fortunate enough to visit that historic region. On the other hand, scattered through the old city, are interesting examples of its later growth that are quite overlooked. Few if any of these buildings possess outstanding historic interest, nor are their details of great merit, yet they are of a distinctive type that marks them as indigenous to the South and as examples of this type and period should be recorded before they are destroyed.

The buildings illustrated herewith are classic in form and detail, showing in some cases evidence of Spanish influence. The details may be somewhat crude as compared with the best work of New England, but not so crude as might be anticipated when one considers that San Antonio in the early nineteenth century was a frontier



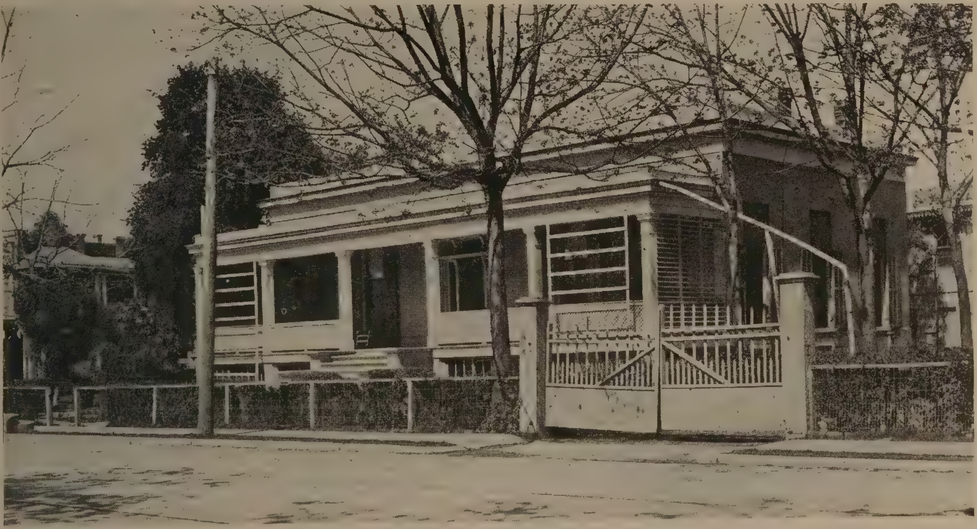
A HOUSE IN SAN ANTONIO, TEXAS



A HOUSE IN SAN ANTONIO, TEXAS

town. Existing in its frontier atmosphere was a culture which persisted and, inspired perhaps by the presence of the fine old Spanish mission buildings, manifested itself in simple, well-designed examples of domestic architecture such as these.

I. T. FRARY.



A HOUSE IN SAN ANTONIO, TEXAS

The American Spirit in Architecture. Vol. 13 of The Pageant of America."*

In publishing the "Chronicles of America" the Yale University Press had an educational as well as a commercial object. The commercial object was to put the Press financially on its feet by a popular success, and from the general acclaim of the work one presumes it was accomplished. The educational object was—I speak conjecturally—to replace more or less obsolete myths and prejudices by modern and more genuine history in the minds of as general a public as possible—a Yalensian form of university extension.

The popular success of the "Chronicles" inspired the production of successful films for the moving picture theaters, and this in turn presumably suggested "The Pageant of America," which is, I take it, partly a development of this educational idea, and partly in the line of a further idea, also educational, namely, to make the country's past more visually present, more actual to the mind by the help of the eye, than unimaginative reading can do; a purpose like that of the American Wing at the Metropolitan Museum and the volume "The Homes of Our Ancestors" reviewed in the May, 1926, issue of THE ARCHITECTURAL RECORD. The Pageant of America is pictorial history. The volumes are coming out somewhat irregularly. Volume thirteen is the pictorial history of American architecture.

Pictorial histories are common enough, but they are not often edited by scholars. The eight hundred and thirty-two illustrations in this volume are all from modern photographs or old prints. There are no fanciful pictures here, except three at the end which are not fanciful either. They are studies in form, and represent the logical effects on architectural form of the New York zoning laws. There is probably no other single volume in existence containing a pictorial survey of American architecture at once so sweeping and so sound.

Our oldest architecture was not English but Spanish, in Florida and the Southwest. But for the most part, the earliest buildings everywhere were makeshifts which soon disappeared. The growth of settled wealth in the Northern states was mercantile and their provincial gentry largely merchants. In the South they were largely planters. It chanced that both these aristocracies flourished at a time when in England the architectural ideas which grew out of the Renaissance were reaching full fruition. These ideas and their resultant style, nowadays called "Georgian," fitted the mood of the upper classes of English colonial America, who had money, built generously and established the developed colonial style. But though they built with dignity and beauty, they never achieved the splendor of the work of their Spanish contemporaries in Mexico; and if Georgian architecture is still a living force in the United States, so also are the forms used by the early Spaniards.

The most notable movement of the early 19th century, it is suggested, may have had some connection with the growth of democracy. Rome had been a republic, but Athens a democracy. If the architecture of republican Rome expressed the ideals of the aristocracy which shaped the early destinies of the American republic, the Greek temple symbolized the aspiration of thoughtful American democrats. So in cities and in rambling country villages, the Greek temple became a court house, a church and even a dwelling. The traveller along the country roads passed many an isolated white farmhouse, with huge pillars reaching up two stories.

The main central part of the 19th century was architecturally chaotic. There were Gothic influences as well as Greek. There was even an attempt at an Egyptian revival. Whether the era of the mansard roof or the era of the so-called "Queen Anne" cottage was the bottom of the descent is a matter of dispute. It was a chaotic time; populations went surging west; the civil war split the country; old societies broke up or declined; new forces were getting under way; sprawling planless cities were springing up in the West. Art was never more buried under haste and makeshift utility. American society was something like a spring flood, headlong and turbid, and architecture in some sense corresponded to national and social conditions.

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*The Pageant of America. Vol. 13. The American Spirit in Architecture by Talbot Faulkner Hamlin. Yale University Press. 1926.

The early signs of changes for the better, of a cultural settling down, are more discernible now than they were at the time. In respect to architecture, two men, both with Beaux Arts training, led the beginnings of the recovery from the mid-century's architectural collapse, R. M. Hunt and H. H. Richardson. Richardson's romanesque was, however, not a very fruitful model for imitators. Hunt's work was mainly French and classic. The influence of the Chicago Fair was very great, and largely toward classic forms for public buildings.

But intellectual America was getting past the stage of imitation. The adaptations of old forms by the younger architects had become relatively competent, intelligent, and even creative. The classicism of McKim is quite a different thing from the classicism of even Bulfinch; the Gothic of St. Thomas' Church is both bolder and more subtle than the Gothic of Grace Church.

But there came at last a more significant development than these, an almost purely American contribution to architecture, whose importance cannot yet be determined, namely, the steel structure and its sheathing walls, driven upward into the "skyscraper" by the pressure of cities, and just now beginning to be shaped by the pressure of zoning laws. The problems involved in this situation are perhaps the most important of those now interesting American architects.

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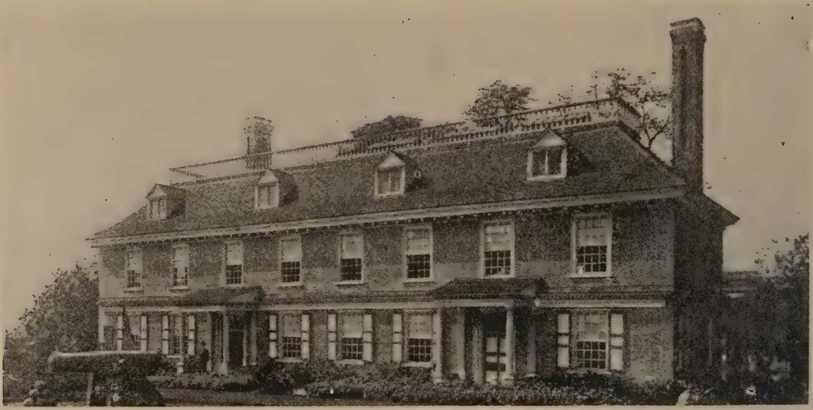
Illustration of a Pennsylvania Log Cabin from *The Pageant of America.* Vol. 13.

Modern American architecture is eclectic, country houses are Georgian, Italian, Spanish and English. But two things give unity and differentiate that new eclecticism from the old chaos: First the houses skilfully planned to meet the complex demands of modern life; and, second, there is a general tendency toward aesthetic simplicity.

It is of course impossible to give any idea of the wealth of material in this volume. Every



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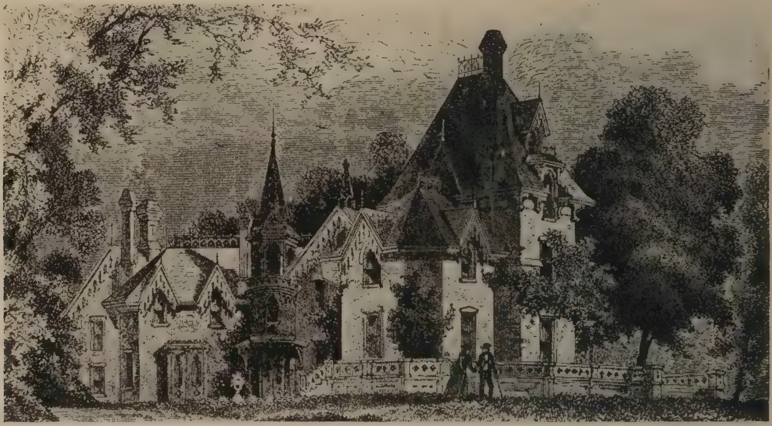

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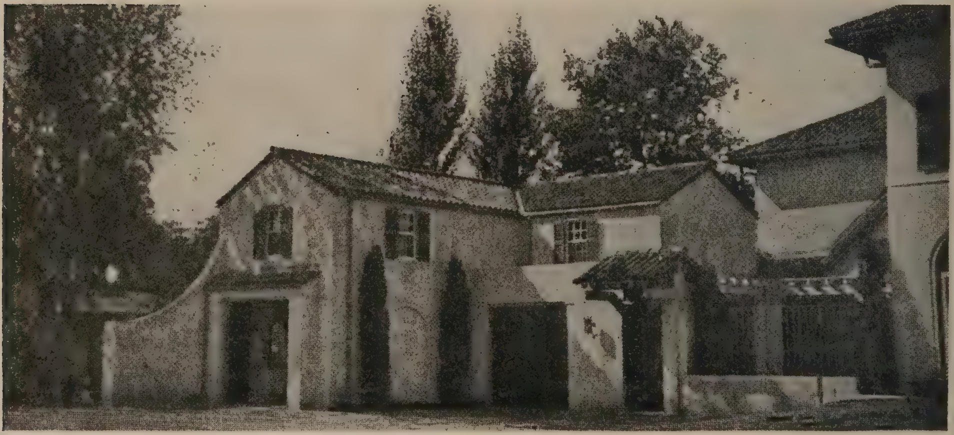
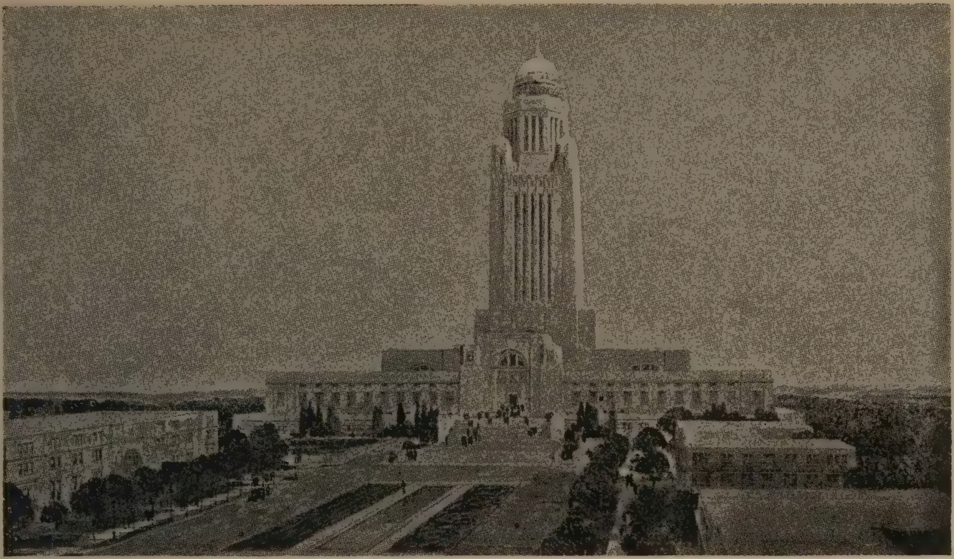


C

Three Illustrations from *The Pageant of America,* Vol. 13, Depicting (a) Late Colonial, (b) Mid-Century Chaotic, and (c) Modern Types of Houses



THE NEBRASKA STATE CAPITOL
From *The Pageant of America*, Vol 13

one of the eight hundred and thirty-two illustrations is selected for a purpose, and separately criticized. The difficulty of covering so huge a field, of being at the same time readable and condensed, is a matter of wise selection. Mr. Hamlin has done his work well, how well one may discover by contrasting his comments with the kind of caption that commonly goes with the illustrations in popular architectural periodicals. How much value the work may have for practicing architects one can hardly conjecture; its main intention is educational; and for the purpose of giving general readers a visual panorama, or students in a school of architecture a preliminary survey, of the history of American architecture, it seems to be extraordinarily well adapted.

© Detroit Photographic Co.
AN OLD STATEHOUSE
From *The Pageant of America*, Vol. 13

Charles Bulfinch, Architect and Citizen. By Charles A. Place, Boston, Mass.; Houghton, Mifflin Co., 1925. 1st Ed. xv, 295 pp. 8¼ x 11 in. Cloth. $15.00.

A book of exceptional appeal to all who have an interest in architecture and in significant American personalities.

Historic Doorways of Old Salem. By Mary Harrod Northend, Boston, Mass.; Houghton, Mifflin Co., 1926. 1st Ed. xv. 96 pp. Ill. 5½ x 8¼ in. Cloth. $3.00.

Salem doorways, famous throughout America, are celebrated in this authoritative and delightful volume. In Salem, chiefly through the genius of Samuel McIntire, is found the pre-eminent record of the colonial craftsman. That the Salem worthies—the Puritan settlers, witches, India merchants—passed in and out through these doorways has made them historic, their intrinsic beauty of proportion and design has made them doubly famous. They have served as models for architects and builders in every corner of the country.

Architecture and the Allied Arts. By Alfred Mansfield Brooks, Indianapolis, Ind.; Bobbs-Merrill Co., 1926. 2nd Revised Ed. v. 283 pp. Ill. 5½x8¾ in. Cloth. $5.00.

This volume sums up in an authoritative, entertaining and attractive manner the essence of what is known about Greek, Roman, Byzantine, Romanesque and Gothic architecture, as well as much about the allied arts.—sculpture, painting, mosaic, stained glass and metal work. The illustrations—more than one hundred and fifty—are particularly apt, some of them new and rare and all selected with special reference to their peculiar fitness. The book was chosen by Richard F. Bach, Associate in Industrial Arts of the Metropolitan Museum of Art, for the reading course on How to Know Architecture, offered by the United States Bureau of Education. It was also placed on the Reading List of the American Federation of Arts.

RECENT PUBLICATIONS

issued by manufacturers of construction materials and equipment.

[*These may be secured by architects on request direct from the firms that issue them, free of charge unless otherwise noted.*]

Ring Joints. "Get Into the Ring." Catalog No. 2. Ring Joints for all kinds of woodwork with particulars of use in various kinds of construction. Details of the Ring Joint Machine. W. L. Evans, 700 Block W., Washington, Ind. 4 x 8½ in. 24 pp. Ill.

Recess Medicine Cabinets. Pier-type structural mirrors and recess medicine cabinets. Catalogue of French plate glass mirrors and cuttings from famous Roman designs. Details of size and description. J. P. Eustis Mfg. Co., 12-16 Ames St., Cambridge A, Boston, Mass. 7¾ x 10¼ in. 8 pp. Ill.

Douglas Fir. "Durable Douglas Fir, America's Permanent Lumber Supply," by Prof. Bror L. Grondal, M.Sc.F. A description of the development of Douglas Fir. Uses for the home. Tables of grades. West Coast Lumber Trade Extension Bureau, 5562-C, Stuart Bldg., Seattle, Wash. 7 x 11 in. 32 pp. Ill.

Showers and Bath Fixtures. A. I. A. File No. 29h3. Loose leaf catalogue giving complete line of shower and bath fixtures with description of action. Features of the Ampinco Valve and its parts. Roughing in and detail measurements. The American Pin Co., Division Scovill Mfg. Co., Waterbury, Conn. 9 x 10.⅞ in. 56 pp. Ill.

Copper Roofs, Etc., "A Real Home." Interesting information on building or remodeling a home. Why copper roofs and pipes should be installed. Lighting fixtures and ornamental work. Comprehensive diagrams. Copper & Brass Research Association, Room 1600, 111 Broadway, New York City. 8 x 10¾ in. 48 pp. Ill.

Refrigerators. Catalog No. 97. Refrigerators for residences. Description of system and construction with measurements, capacity, weights, etc. Tables for cooling and location of wall openings for outside icing. McCray Refrigerator Sales Corp., 662 Lake St., Kendallville, Ind. 7.⅜ x 10¼ in. 48 pp. Ill.

Linoleum, Composition, Treadlite and Cork Tile. A series of booklets showing standard colors and designs. The advantages and uses of Battleship Linoleum. Detailed account of cork-composition marbleized tile. Practical working specifications for installation. Bonded Floors Co., 1421, Chestnut St., Philadelphia, Pa.

Drains. Roof drains and accessories for every roof with specifications and prices. Installation information. The Josam Manufacturing Co., 4900 Euclid Bldg., Cleveland, Ohio. 3½ x 6¼ in. 16 pp. Ill.

Electric Refrigeration. New household models in various sizes. Specifications and description. Particulars concerning the machine. The Coldak Corp., Dept. A. R., 8 West 40th St., New York City. 6¼ x 5¾ in. 16 pp. Ill.

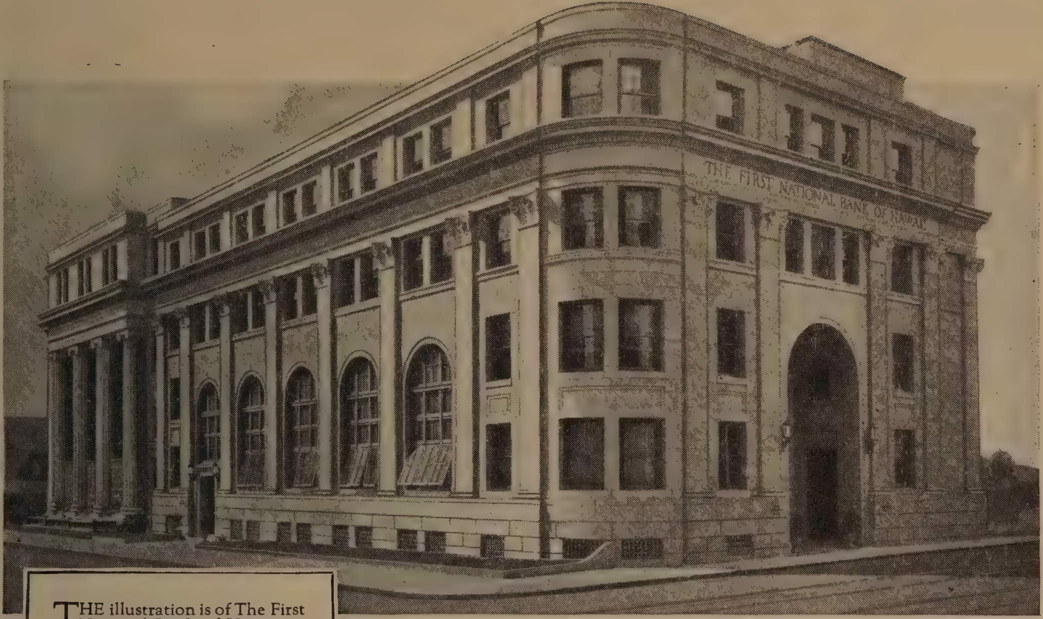
Electrical Wiring Devices. Catalogue "S." "H. & H." switches, sockets, accessories and wiring material. Description and particulars regarding size, weight, packing, prices, etc. Latest designs and improvements. The Hart & Hegeman Mfg. Co., 342, Capitol Ave., Hartford, Conn. 8¾ x 10¼ in. 123 pp. looseleaf. Ill.

Marble-ized Tile. A new cork composition floor with description and advantages of use. Looseleaf sheets of typical installations. Bonded Floors Co., Inc., 1421 Chestnut St., Philadelphia, Pa. 6 x 9 in. 12 pp. Ill.

Tile. "Gold Seal Treadlite Tile." Advantages and description of material and installation. Looseleaf sheets of typical installations. Bonded Floors Co., Inc., 1421 Chestnut St., Philadelphia, Pa. 6 x 9 in. 12 pp. Ill.

"Safety 'Arktite' Plugs and Receptacles, Interlocking Switches and Plugs and Safety Hand Lamps." Folder No. 38. Special features. Methods of grounding portable devices through "Arktite" plugs and receptacles. Advantages and full description. Crouse-Hinds Co., Syracuse, N. Y. 11½ x 6¼ in. Ill.

Fans. Bulletin No. 7003. American H. S. Fans. Distributing features. Specifications describing and illustrating the various parts of a complete Forced Draft Blower. Capacity tables. Detailed dimension sheets of the standard arrangements. American Blower Co., 6004 Russell St., Detroit, Mich. 8½ x 11 in. 28 pp. Ill.



THE illustration is of The First National Bank of Hawaii at Honolulu, a beautiful and serviceable stucco structure recently completed there.

* * *

Messrs. York & Sawyer, New York, were the Architects; A. Knowles, San Francisco, was the Plastering Contractor and the prepared Portland Cement Stucco, using Medusa White Cement, was furnished by California Stucco Products Company of San Francisco.

* * *

Prepared stucco included all the casting material as well as the float material used for the covering of the entire exterior surface. The fluted columns at the rear were run in place. The caps of these columns as well as the caps at the head of the pilasters and the dental course along under the cornice are all cast-stone.

* * *

The exterior surface of the building was blocked off and the joints were tuck pointed. The building is of reinforced concrete of the curtain wall type.

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The ARCHITECTVRAL RECORD

OCTOBER 1926

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Colormix is the original, perfected and proven concrete dye for hardening and coloring concrete floors integrally, and is available in a range of nine attractive colors. The cost of a Colormix Floor is slightly more than that of ordinary concrete. A look at any of the thousands of Colormix Floors now in service will prove the wisdom of the small additional investment.

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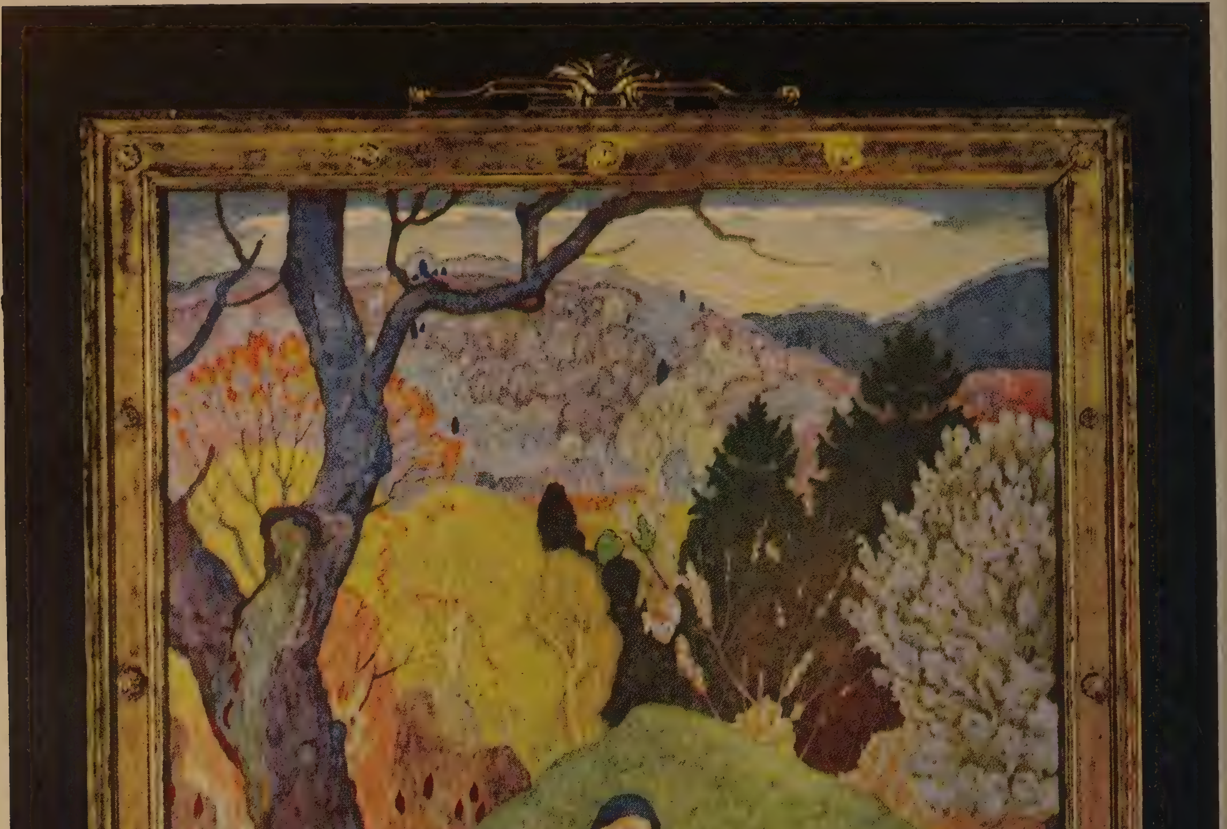
There are approximately 100,000 square feet of battleship gray Colormix Floors in the New Wanamaker Store.



"Almighty Spring"
From A Painting by Eugene F. Savage

The
ARCHITECTVRAL
RECORD

VOLUME 60 OCTOBER, 1926 NUMBER 4

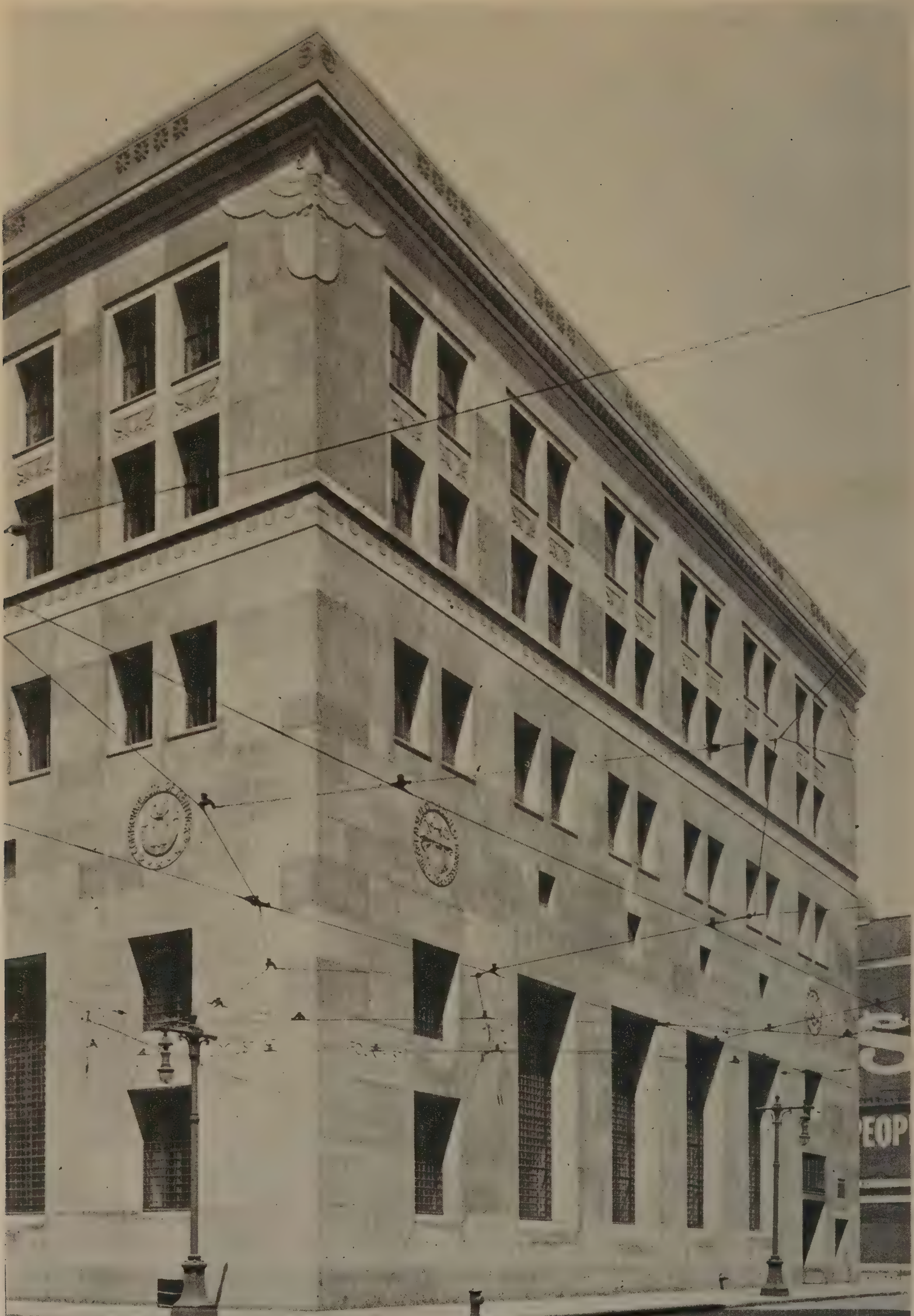
The FEDERAL RESERVE BANK, ST LOUIS, MO

MAURAN, RUSSELL & CROWELL, ARCHITECTS

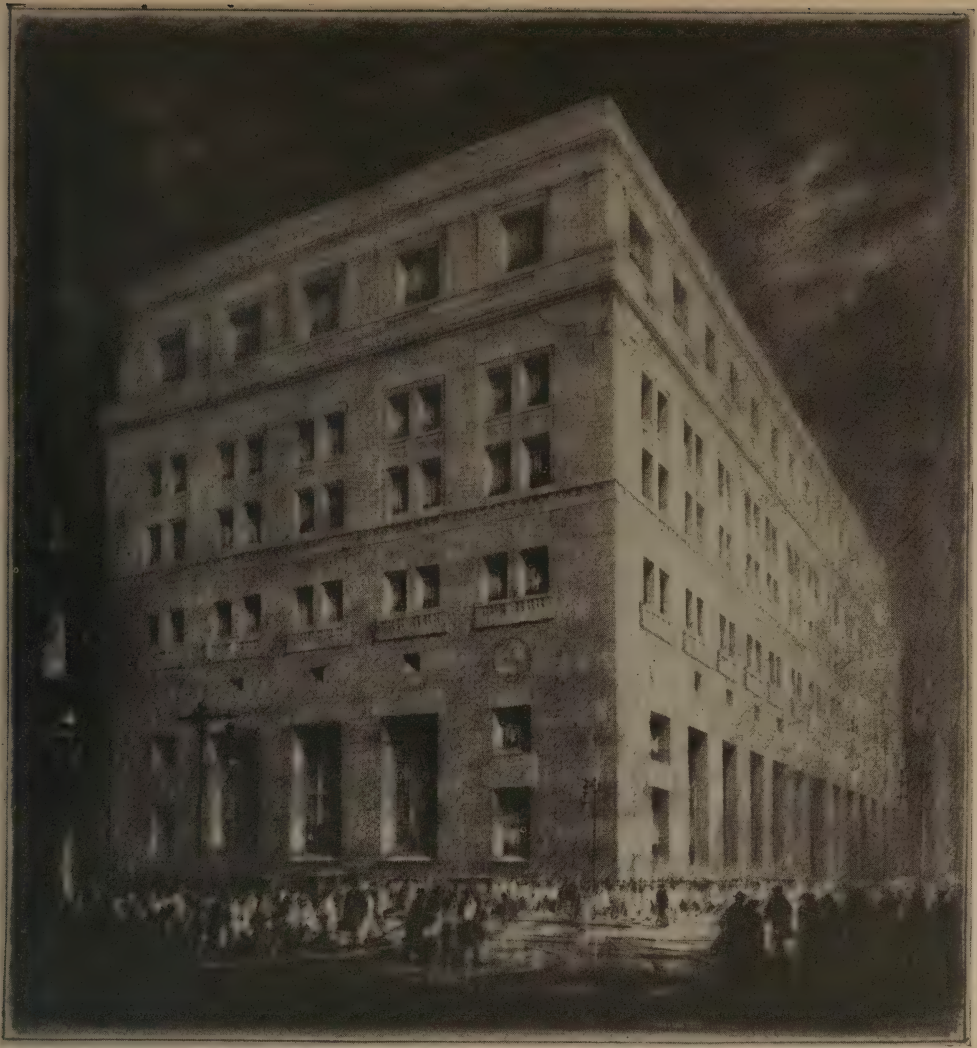
By A. N. Rebori

THE FEDERAL RESERVE BANK, St. Louis, Mauran, Russell & Crowell, architects, is an inspiring work which achieves monumental grandeur without the use of columns. Its exterior design is the outcome of a bold, direct expression of plan requirements in terms of noble building material dependent on carefully proportioned openings set in deep reveals which perforate the vault-like walls carried from sidewalk to roof in sheer beauty of tapering form, freed from marked horizontal emphasis or architectural appliqué. Thus to the man in the street, the predominating appearance of the building is that of a veritable strong box worthy to house the surplus gold of a great banking system. Architecturally it is of even greater significance, making as it does, a pronounced and remarkable change from the customary columnar treatment of its predecessors.

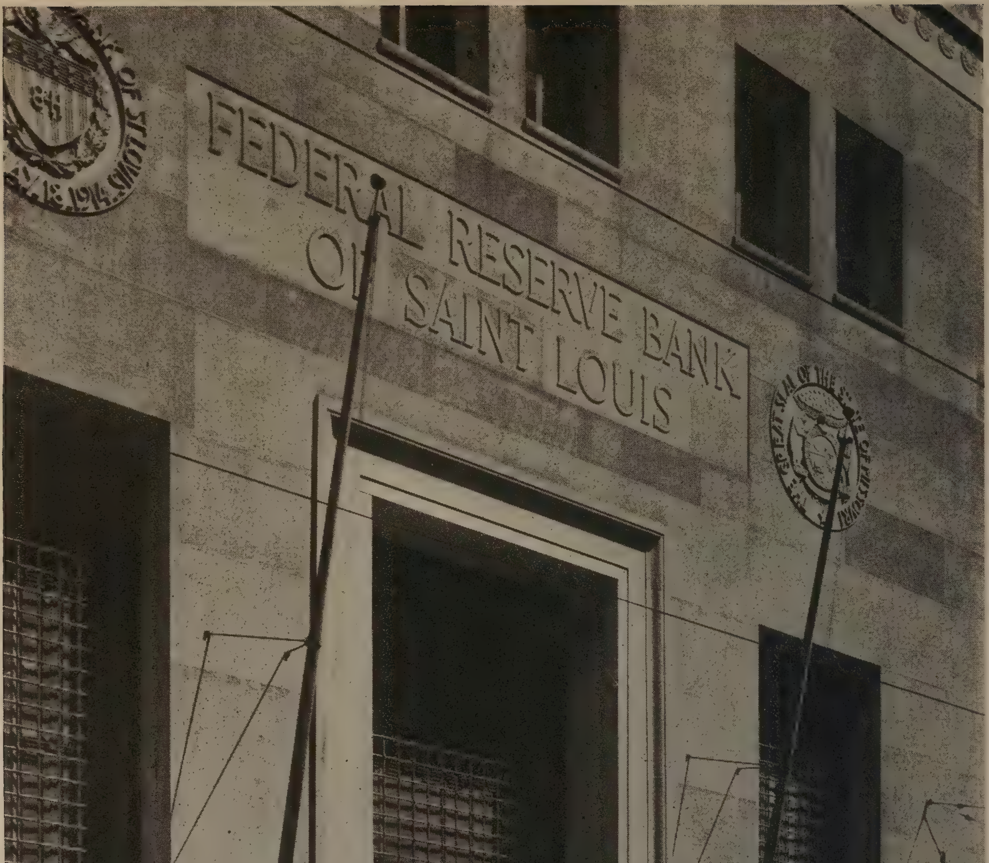
As a unified achievement, the importance of this work is of such magnitude that it belittles the issue to indulge in a review of detail. Let it suffice to say that where ornamentation is used it is purposely kept in low relief for fear of marring the prevailing keynote of simplicity so successfully arrived at in the general treatment and it is this same striving towards simplicity in architectural design which is bringing forth the few genuine works of today. At least, a common effort in this direction is evidenced in recent structures by the better architects, and as enlightenment grows, this encouraging movement is bound to attain sufficient momentum to arrive at sweeping results along permanent lines of established procedure for architecture. That is why the Federal Reserve Bank of St. Louis stands out so prominently, designating as it does, a period of change denoting the passing from favor of the usual variegated types of architecture taken anywhere from the time of King Tut to the reign of President Coolidge, regardless of their appropriateness to the problem in hand.



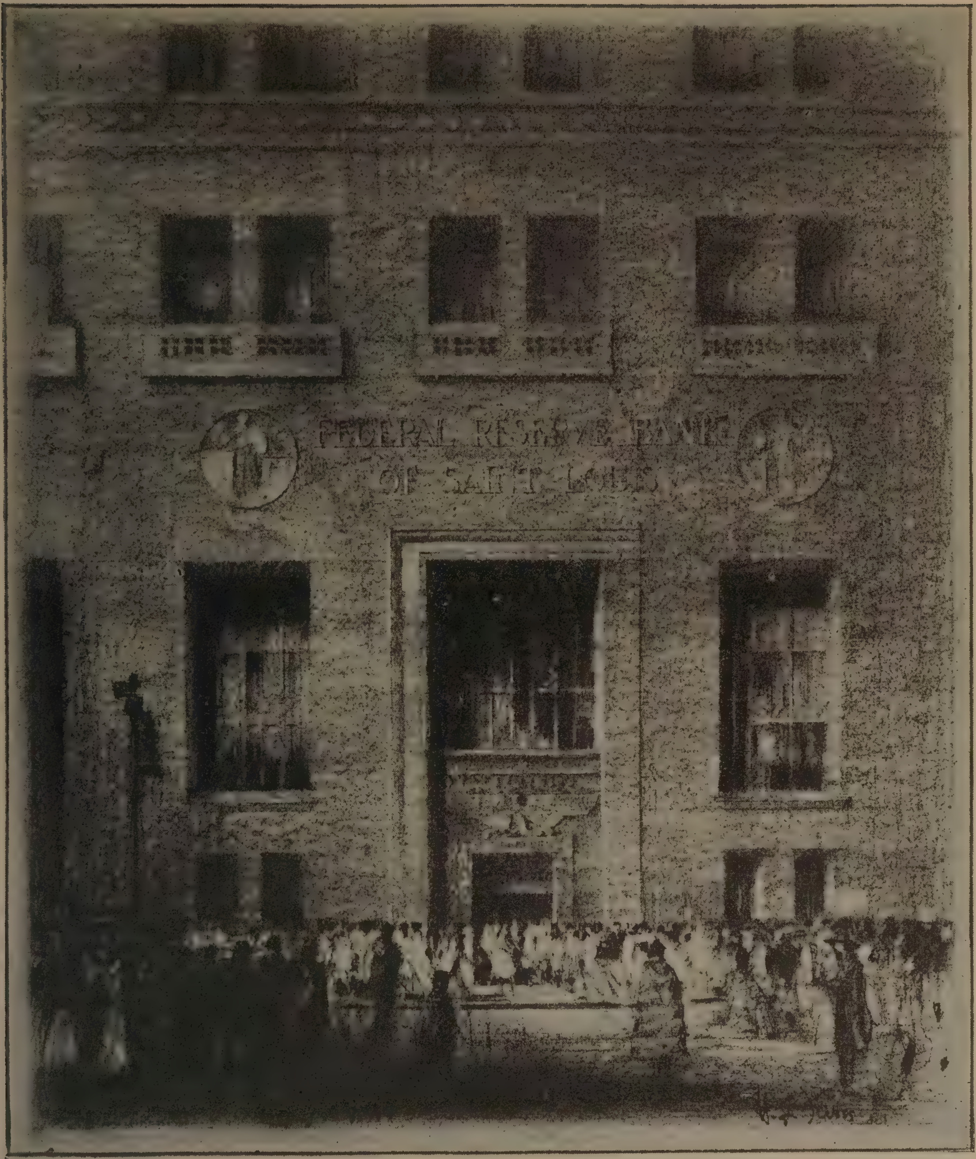
THE FEDERAL RESERVE BANK, ST. LOUIS, MO.
Mauran, Russell & Crowell, Architects



General View
THE FEDERAL RESERVE BANK, ST. LOUIS, MC.
Mauran, Russell & Crowell, Architects
(From a drawing by Hugh Ferriss)



Entrance Detail
THE FEDERAL RESERVE BANK, ST. LOUIS, MO.
Mauran, Russell & Crowell, Architects



Entrance Detail

THE FEDERAL RESERVE BANK, ST. LOUIS, MO.
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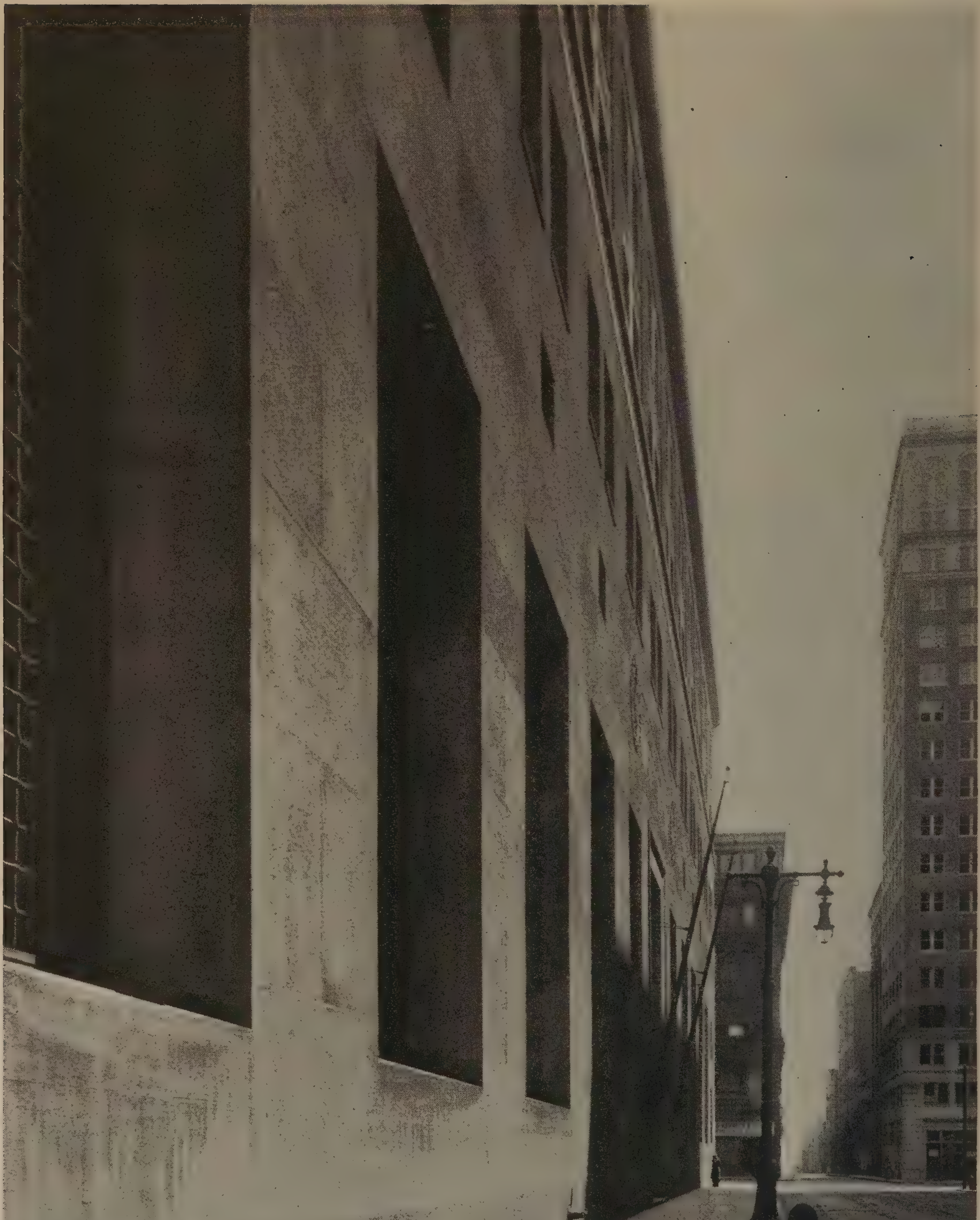
(From a drawing by Hugh Ferriss)



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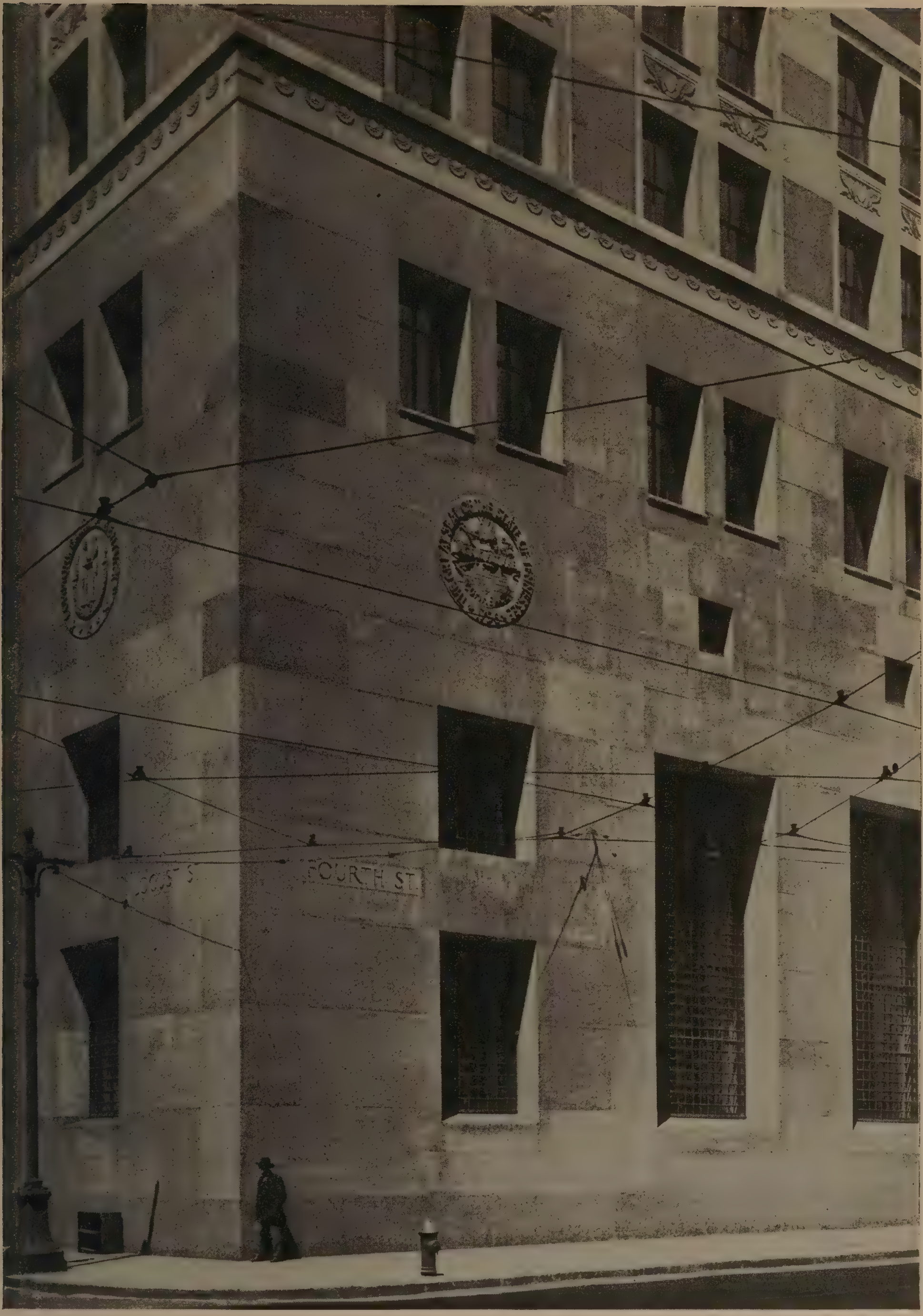

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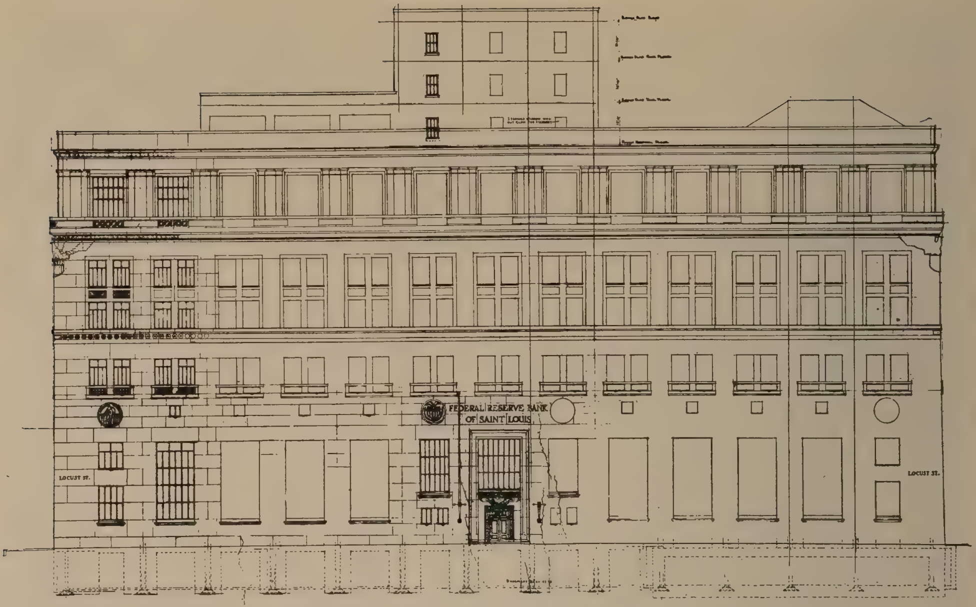
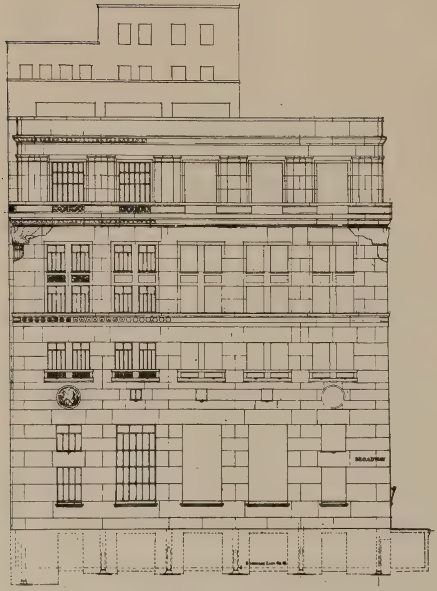
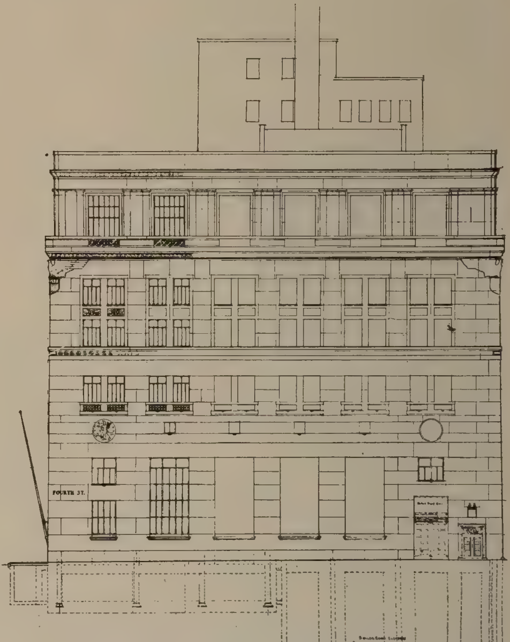


SOUTH ELEVATION (LOCUST STREET)
SCALE 1/8"=1'-0"



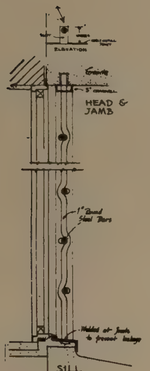
WEST ELEVATION (BROADWAY)
SCALE 1/8"=1'-0"



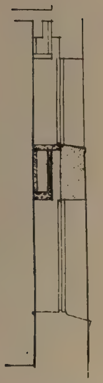
EAST ELEVATION (FOURTH STREET)
SCALE 1/8"=1'-0"

The Architectural Record *October, 1926*

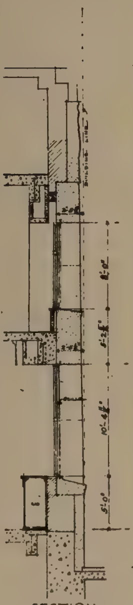
THE FEDERAL RESERVE BANK, ST. LOUIS, MO.
Mauran, Russell & Crowell, Architects



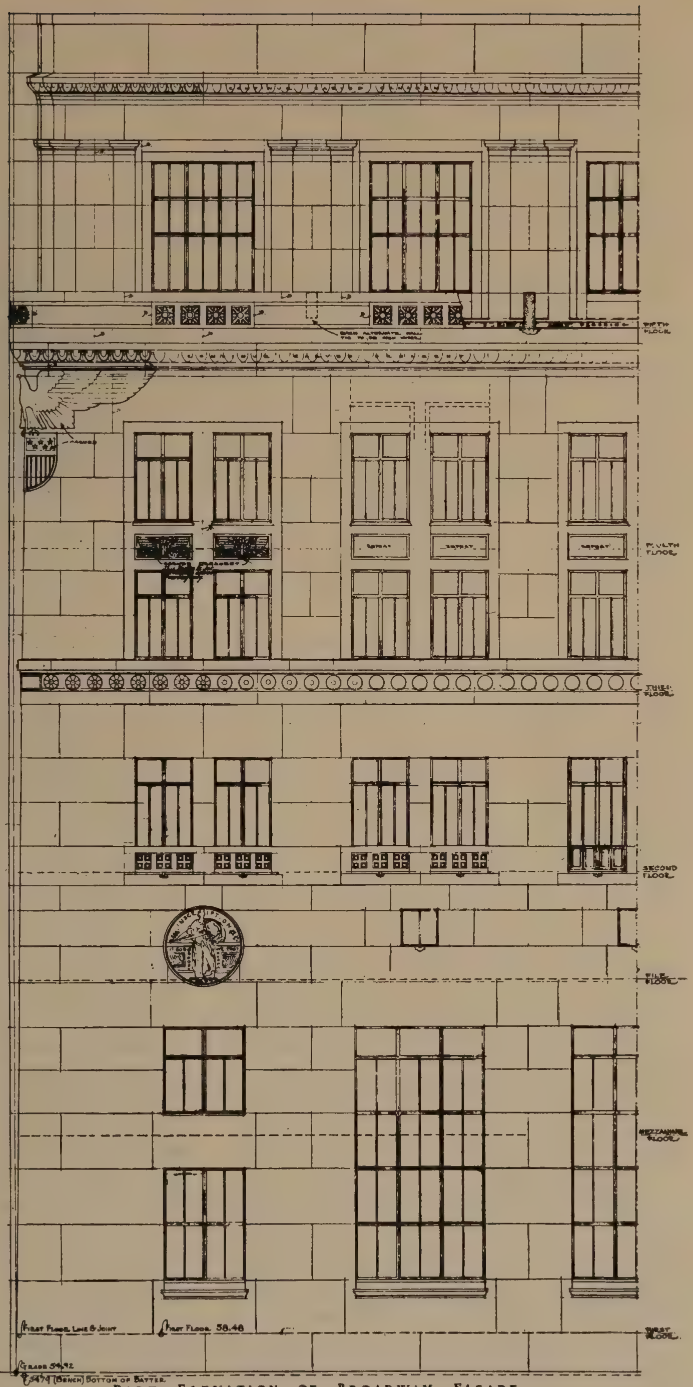
1½" DETAIL OF GRILLE



SECTION WHERE MEZZANINE DOES NOT OCCUR



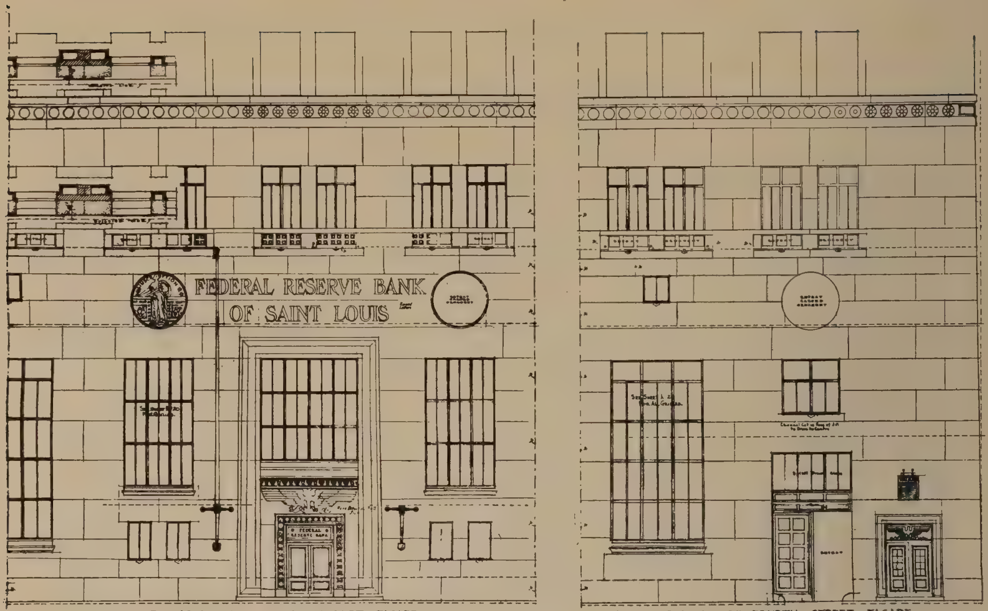
SECTION



· PART · ELEVATION · OF · BROADWAY · FACADE ·

THE FEDERAL RESERVE BANK, ST. LOUIS, MO.

Mauran, Russell & Crowell, Architects



PART ELEVATION OF LOCUST STREET FACADE

PART ELEVATION OF FOURTH STREET FACADE

THE FEDERAL RESERVE BANK, ST. LOUIS, MO.
Mauran, Russell & Crowell, Architects

We have seen in the past that no bank was complete without a row of columns, either attached, detached or in portico, the main idea being to attract the public with which the ordinary commercial bank transacts its business and wishes to impress, as well as serve, in quarters especially arrayed for that purpose. Aiming to please, the banker and his architect usually give the public what they think the public want or understand, and play the game for all there is in it, thereby producing nothing that is genuine but much that is mongrel, being swayed now along one direction and now along another in their attempt to satisfy the uninformed multitude.

The main result so far achieved by this procedure has been to indicate to the man on the street a sense of solidity and prosperity, bearing the impress of grandeur extolled in terms of classic orders, whether the building be two stories, ten stories or twenty stories in height; in fact, the so-called classic type for bank buildings has heretofore been so thoroughly sold and acceptable to both the banker and his public, that up to recent years any attempt to deviate from this path devoid of imagination meant failure and the loss of a job to any promising architect. In consequence of this general impression, those chosen for the purpose of designing and carrying out important bank buildings were selected primarily because of previous performance along the accepted lines. Outside of expressing a personal ego in terms of erudite familiarity with the style adopted, the net accomplishment from the point of view of expressive architecture is almost negative.

In order that we may properly understand what has actually been accomplished by the designers of the St. Louis Bank, a resumé of the salient features of the Federal Reserve system and some of the internal working units which go to make up the St. Louis building will not be amiss. To begin with, the Federal Reserve Bank in any one particular district is part of the national system. Briefly, that system is composed of the Reserve Board of Washington and twelve reserve banks with their twenty-three branches covering the entire country. These super temples of finance are not government institutions but private corporations whose stock is owned by the member banks. All national banks and many state banks and trust companies are members of, and transact business with, the Reserve Bank of their district. These member banks elect six directors and the Federal Reserve Board appoints three directors. The Federal Reserve Board, consisting of six members appointed by the President with the Secretary of the Treasury and the Comptroller of the Currency as Exofficio members, is not an operative body, but supervises the reserve banks and co-ordinates them into an effective national system. Unlike the commercial bank which transacts its business with the public, whom it wishes to impress as well as serve, the Federal Reserve bank has no competitors; its chief function is to bring together independent banks controlled by local men and capital and give them each the stability of a nation-wide system with pooled resources. Contact with member banks is established entirely through messengers and transfers are made by charges on the books of the Reserve banks so that the necessity of remitting currency from place to place seldom arises.

The requirements of a building of this type are of an exacting nature, the successful operation of which depends wholly on the proper planning of interrelated departments to secure efficient, expeditious, safe and economical passage of currency, securities and papers through the channels set up to convey the same. The public is not admitted within the portals of a Federal Reserve bank, hence the character of its outward appearance is all we have from which to judge of what takes place within. Unfortunately, it is not permitted to publish the floor plans of the Federal Reserve Bank of St. Louis but we are able to give on Pages 296-298 some of the working features of the building which are typical, without disclosing the general plan. For efficiency and safety of operation, the St. Louis structure includes such features as direct transit of employees from their single entrance and isolated group of elevators to their working location via their several locker rooms; the placing of every desk within thirty feet of natural light; the elimination of noise of typewriters and adding machines by the use of rubber tiling on the floors and an acoustical treatment of the ceilings; the furnishing of recreation and useful practice in the form of bowling alleys and rifle range; and by artificial ventilation of the basement, first and second floors with warmed air in winter and cooled air in summer.

For expeditious, economical and safe passage of valuable securities, coins, currency and paper from its mob and burglar-proof vault in the basement through the required departments, there is a security elevator approached through double control gates and absolutely under the control, during transit, of the official responsible for its safety. For the protection of securities and coin coming from member banks by truck, entrance to the safety court is gained only under the eye of the guard sheltered in his conning tower by bullet-proof glass, who controls the mob-proof steel sliding portcullis, and when, in like manner, the truck has passed the second sliding barrier and delivered its load at the receiving platform, the shipment is checked on its way to the security elevator. By the same process coal is delivered and ashes removed within the walls of the building so that no opening from the outside exists save three adequately guarded portals—the main entrance on Locust Street, the employees', and safety court on Fourth Street.

For protection of money and securities brought to the bank by messengers, a unique device, placing full control in the hands of the tellers, has been installed in the form of an ante-room in front of each cage. Through the double glazed partition the teller recognizes the member bank's messenger who has pressed the admission bell beside the self-closing entrance door; if everything is in due form, the teller pushes the button on the underside of his counter, releasing the latch and the messenger having entered the anteroom, the door closes behind him. The door cannot be opened except by the teller's release button. Thus transfer and accounting goes on between the responsible parties in total safety and privacy.

The great exchange floor on the first story is tied to its direct control, the officers' quarters on the second floor, with the file room placed unobtrusively between but accessible to both. Above are the two office or clerical force floors intimately related in design as well as in plan, while the whole is topped by an attic story containing the recreational and luncheon facilities provided for the welfare of the employees.

The public, while having no business relations directly with the bank, is, however, keenly interested from every viewpoint in the exterior of a structure which represents to it the solidity and integrity of the greatest financial system in the world, and since it is the ideal of every architect to create a design expressive not only of the functions of the various parts of the interior, but to embody, as well, the spirit of the institution, the St. Louis Federal Reserve Bank can bear careful study as a worthy achievement in symbolic architecture, which combines a massive wall treatment suggestive of age-old dignity unencumbered with architectural detail which might detract from its superb simplicity, with a grouping of correlated parts to indicate their true relation and purpose.

The exterior walls of the building are of solid masonry, self-supporting, independent of the structural steel cage carrying the floor loads and roof. Ventilating ducts and air spaces are encased on the inner side of the exterior walls, thus permitting deep reveals for the lowest story openings, which in some cases are over four feet deep. A slight batter to the lower stories of the limestone ashlar face gives the entire structure a graceful tapering hardly perceptible to the observer but solid and substantial in its effect. To accomplish the massive in design without in any way detracting from the practical necessity requires a thorough knowledge of conditions and a full sympathy with plain, substantial building material.

Simplicity, strength and scale are the dominating notes in the exterior design of this monumental building and we believe that it will be along these very lines that the permanent architecture of America will eventually develop. In the meantime, we are gradually seeing the light, and it behooves us to put forth a plea for simplicity, striving for the economical lines of the aeroplane, the dynamo and the hull of the ocean greyhound. When this is done, architecture will no longer be practiced as an economic waste. Eventually and naturally the artist rises amongst us to point the way to utility and beauty. However, the practice of architecture should be confined to the needs of a problem and the proper use of appropriate building materials. Thereby the battle of styles will end, but the result will be style of a lasting quality.

ISOMETRIC PERSPECTIVE

By

Claude Bragdon

ARCHITECTURE, having preëminently to do with *solids,* the architect should think always in terms of three dimensions rather than of two. Perspective is the science of representing solids in plane projection, as they appear to the eye; its mastery and use should therefore be part of the equipment of every architect.

But the many advantages of designing always in perspective were revealed to the present author only when he entered the field of theatrical production, after having practiced architecture for many years. A stage scene does not lend itself, as does a building, to representation by means of plan, elevation and section; it can be adequately realized only in model form. Models, however, are difficult to make, cumbersome and expensive; above all, they take time, and in the theatre of all places everything must be done at top speed. Now the perspective drawing of a scene, though far from being an adequate substitute for a model, sometimes renders the making of a model unnecessary, if the drawing is sufficiently clear and explicit. It possesses also this advantage, that human figures and stage properties can be shown with ease—an important consideration to one who believes, as does the present author, that scenery should never be anything other than an appropriate and significant background for the figures of the actors.

Would it not be an excellent thing if every architect were forced, from the very outset, to consider his structure thus three dimensionally, and in relation to the human figures which people his scene, for whose sake every building, in the last analysis, alone exists?

Many palpable faults and shortcomings of our current American architecture may be traced to the custom—now almost a settled habit—of designing in elevation instead of in perspective; buildings are *drawn* rather than *imagined,* as their general lack of *organic quality* clearly shows. Now designing in perspective forces the architect to think *unitively,* to visualize clearly, but owing to his lack of easy familiarity with the perspective method, time pressure, or on account of sheer intellectual indolence, this is all too often neglected. Instead, the task of making the perspective of a building is delegated

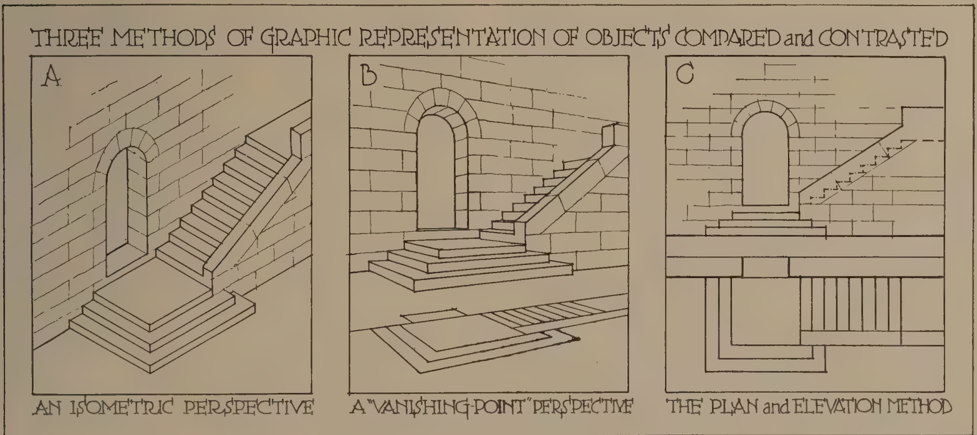

THREE METHODS OF GRAPHIC REPRESENTATION OF OBJECTS COMPARED and CONTRASTED
A
B
C
AN ISOMETRIC PERSPECTIVE
A "VANISHING-POINT" PERSPECTIVE
THE PLAN and ELEVATION METHOD

Illustration 1.

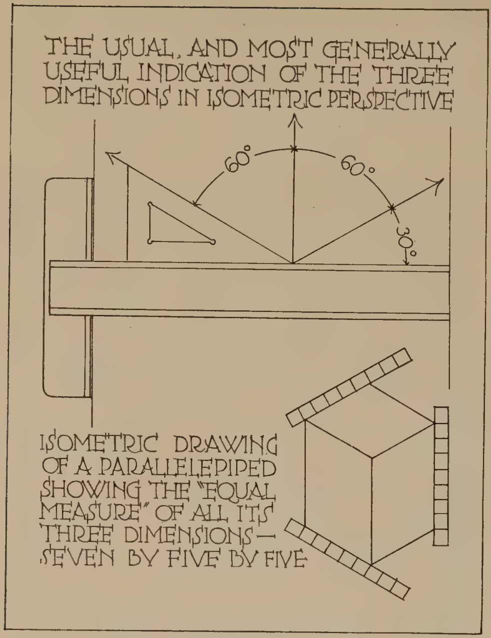

THE USUAL, AND MOST GENERALLY USEFUL INDICATION OF THE THREE DIMENSIONS IN ISOMETRIC PERSPECTIVE
60°
60°
30°
ISOMETRIC DRAWING OF A PARALLELEPIPED SHOWING THE "EQUAL MEASURE" OF ALL ITS THREE DIMENSIONS— SEVEN BY FIVE BY FIVE

Illustration 2.

to some subordinate, or to a specialist, after the designing is done rather than while still in process, and with a view only to "selling the idea," so that the professional renderer, or perspective expert, has come to stand in much the same relation to the designer as does the so-called "song plugger" employed by music houses, to the composer of the song.

Now the ordinary type of perspective drawing is difficult and awkward to make, which is one reason why the art is not more universally practiced. But there is a type of perspective—isometric, so called —which is rapid, direct and simple, shows things truly and clearly, and requires no other paraphernalia than working drawings require. Views of stage scenery, done according to this convention by the author and published from time to time in The Architectural Record, so interested its editor that he asked for an essay on the subject—and here it is.

Aerial photography, which shows things as they appear from high up and far away —in bird's-eye view—is making this third dimensional aspect of the world increasingly familiar. When in contact with the earth our vision is limited: near objects loom large, concealing those more remote, but as we rise above the earth we perceive as *beyond* that which was *behind;* things appear more nearly in their true relations —"just as they really are"—the picture, without ceasing to be a picture, takes on some of the characteristics of *a map*.

Now an isometric perspective is curiously like the aerial photograph in that the point of sight is far removed—at infinity, in point of fact—and consequently such a perspective, though itself a "distorted image" is free from that order of diminishment and distortion to which ordinary perspective is subject, which aims to reproduce the optical image, in which all parallel lines in the same plane converge to a point—contrary to Euclid's axiom about parallels—and things appear larger or smaller, according to their distance away. Isometric perspective, on the other hand, shows things as they are *known to the mind:* parallel lines are really parallel; there is no far and no near, that is, the size of everything remains constant, because everything is assumed to be the same distance away, and the eye of the spectator not at one point merely, but everywhere at once.

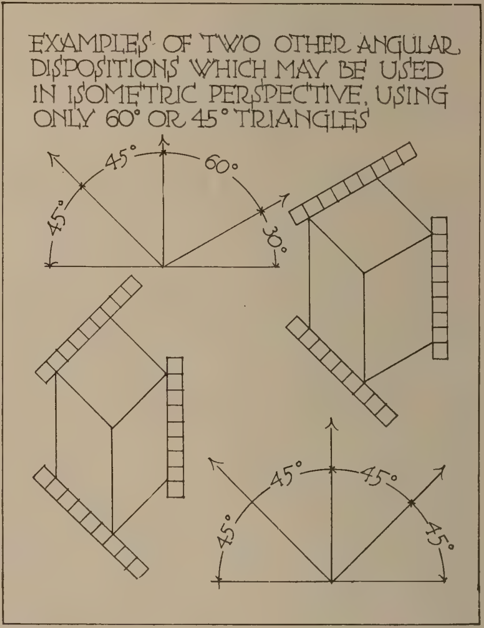

EXAMPLES OF TWO OTHER ANGULAR DISPOSITIONS WHICH MAY BE USED IN ISOMETRIC PERSPECTIVE, USING ONLY 60° OR 45° TRIANGLES
45°
60°
45°
30°
45°
45°
45°
45°

Illustration 3.

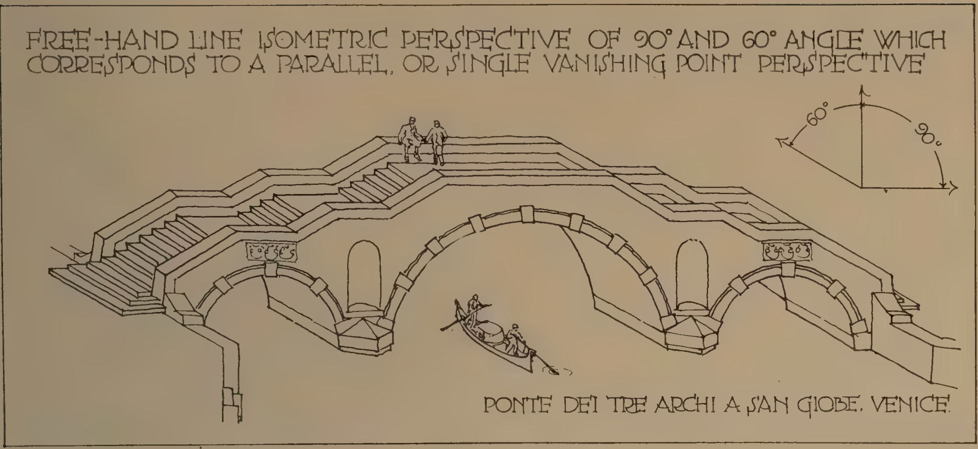

FREE-HAND LINE ISOMETRIC PERSPECTIVE OF 90° AND 60° ANGLE WHICH CORRESPONDS TO A PARALLEL, OR SINGLE VANISHING POINT PERSPECTIVE
60°
90°
PONTE DEI TRE ARCHI A SAN GIOBE, VENICE

Illustration 4.

For these and other reasons isometric perspective is—or might be—a great aid to the architectural designer, first as an easily achieved projection of his *mental image* of a thing, conveying the illusion of three-dimensionality without going through the tedious processes of point perspective; second, as an interpreter to the artizan of working drawings, because an isometric perspective is a *realistic* working drawing—plan, elevation, picture all in one; and third, because on account of its being true to scale, an isometric perspective can itself *be made* a working drawing in some cases, and one much more clear and effective than any other kind.

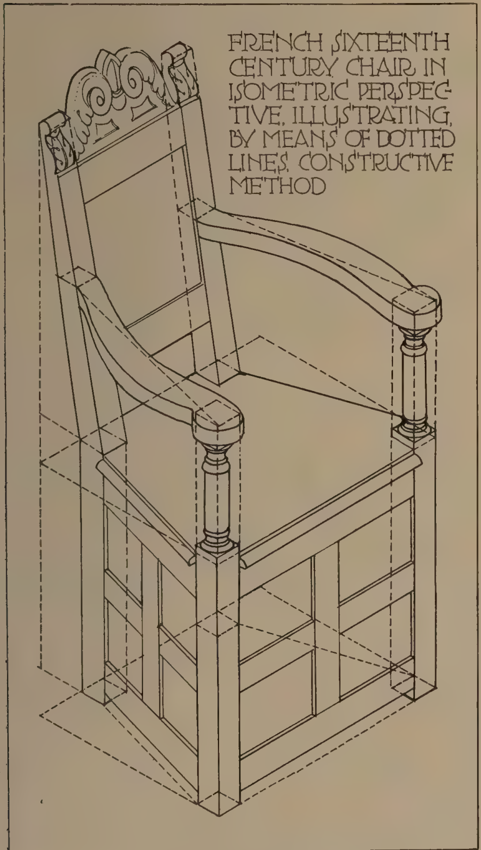

FRENCH SIXTEENTH CENTURY CHAIR IN ISOMETRIC PERSPECTIVE, ILLUSTRATING, BY MEANS OF DOTTED LINES, CONSTRUCTIVE METHOD

Illustration 5.

For purposes of comparison there are shown in illustration 1 three different methods of representing in plane projection the same architectural subject—a stairway and an arch in a wall. A is an isometric perspective, the advantages of which are under discussion. B is a vanishing point, or pictorial perspective, and C shows the subject in plan and elevation, that is, in working drawing form. Now A combines the advantges of B and C in that it is sufficiently realistic to be understood at a glance, which is true of B but not of C, and at the same time A is true to measurement in any part of any one of its three perpendiculars, which is true of C but not of B.

The isometric method is so simple that it scarcely needs explaining: this is perhaps one reason there is no special literature on the subject at all. There are no vanishing points and consequently no

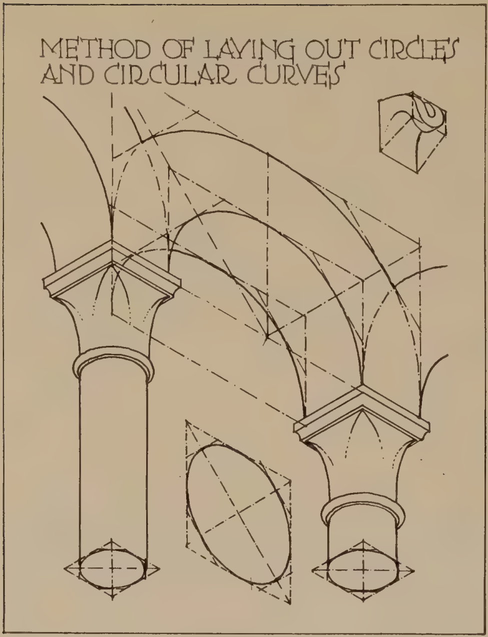


Illustration 6.

diminishments, everything retains its same size under all conditions of distance and position, as would be the case were the spectator an infinite distance away. To anyone at all skilled in point perspective, isometric perspective presents no difficulties, while even without that knowledge the method should be mastered by means of a careful study of the accompanying drawings supplemented by a little practice. What it really amounts to is the correlation in one drawing of both plan and elevations, but in a *distorted* form. This drawing will be true to scale when measured on any one of the three perpendiculars, but right angles will have become obtuse or acute, circles will have become ellipses, and so on.

Illustrations 2, 3 and 4 give the necessary initial instruction. The first thing to establish is the three perpendiculars. The line representing one of these will invariably be vertical, and the other two will be expressed by the two sides of an angle ranging (usually) from ninety to one hundred and fifty degrees. Because the triangles in common use by draughtsmen are of thirty, forty-five, and sixty degrees the commonly employed angles are those shown in the examples presented, all of which can be "worked" with T square and triangle. The disposition of lines shown in illustrations 2 and 4 are most common, though the two shown in illustration 3 are useful for special purposes, when it is more particularly desired to make *the plan* clear and prominent.

Having established the three perpendiculars, each becomes a measuring line upon which, and by means of which the various elements of the given subject may be plotted. Herein is the great advantage of the isometric method, both for simplicity of making, and for ease of "reading"—the drawing is to scale on all perpendiculars: of "equal measure" as the very name implies. The approved method of procedure is to establish first the main rectilinear solids, and then subject them to such subdivision as the necessities of the case demand, proceeding always from the larger, simpler forms to the smaller and more intricate. Pursuant of this method, a circle is established first as a square in perspective, then as an octagon. Within this as a guide an ellipse, repre-

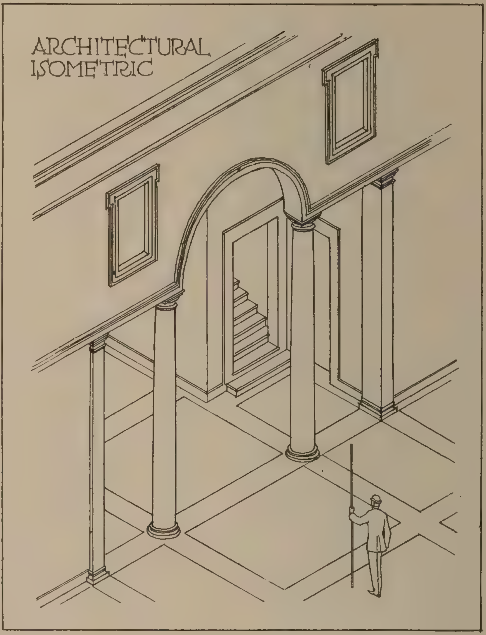


Illustration 7.

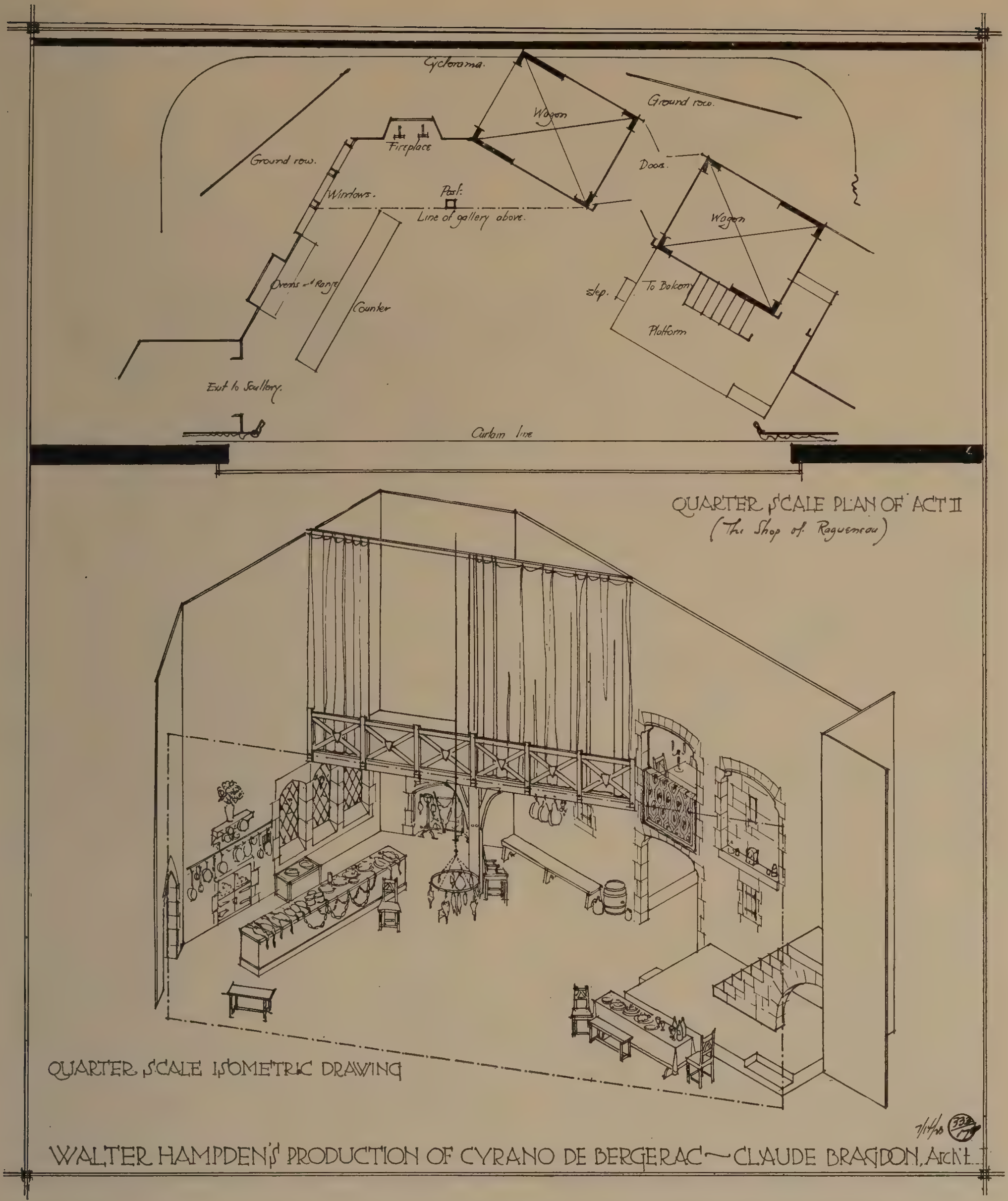


Illustration 8.

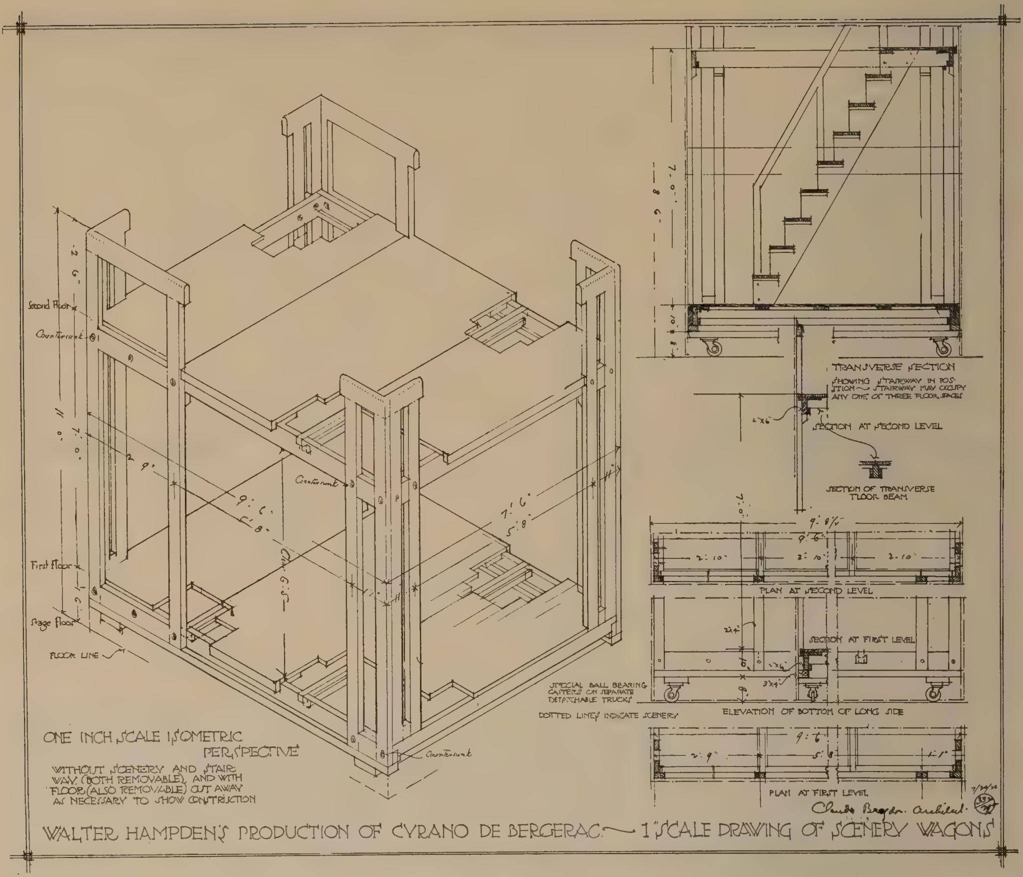

Second Floor
Countersunk
First Floor
Stage floor
FLOOR LINE
Countersunk
Countersunk
TRANSVERSE SECTION
SHOWING STAIRWAY IN POSITION ~ STAIRWAY MAY OCCUPY ANY ONE OF THREE FLOOR SPACES
4"x6"
SECTION AT SECOND LEVEL
SECTION OF TRANSVERSE FLOOR BEAM
PLAN AT SECOND LEVEL
SECTION AT FIRST LEVEL
2x4
1"x6"
3x4
SPECIAL BALL BEARING CASTERS ON SEPARATE DETATCHABLE TRUCKS
DOTTED LINES INDICATE SCENERY
ELEVATION OF BOTTOM OF LONG SIDE
PLAN AT FIRST LEVEL
ONE INCH SCALE ISOMETRIC PERSPECTIVE
WITHOUT SCENERY AND STAIRWAY (BOTH REMOVABLE), AND WITH FLOOR (ALSO REMOVABLE) CUT AWAY AS NECESSARY TO SHOW CONSTRUCTION
Claude Bragdon. Architect.
WALTER HAMPDEN'S PRODUCTION OF CYRANO DE BERGERAC — 1" SCALE DRAWING OF SCENERY WAGONS

Illustration 9.

senting the given circle, can easily be drawn.

These processes are indicated in illustrations 5 and 6. Illustration 7, also 1 and 4, show how various architectural subjects look when translated into isometric perspective, and hint at the usefulness to the architect of the method. Illustration 9, however, suggests its most important field and function: that of making intelligible at a glance some more or less complicated piece of construction, difficult both to indicate and to understand by means of the plan, elevation, section process. For the reader who is interested in the higher reaches of the art of isometric perspective, illustration 8, one of the scenes from *Cyrano de Bergerac,* originally published in the December, 1923, number of THE ARCHITECTURAL RECORD is here reproduced. With the aid of these so numerous and various examples anyone who can draw at all should be able to master this useful and amusing art.

The GENNADEION LIBRARY, AMERICAN SCHOOL of CLASSICAL STUDIES, ATHENS

By

John V Van Pelt

THE ONLY COMMENTS voiced by the professors in a French atelier are those of condemnation. Students of mine tell me that I must have absorbed the method. Certainly it has become a habit on my part, when discussing a building, to criticize the faults and to take any good qualities it may possess for granted.

Imagine my consternation when the kindly editor of the ARCHITECTURAL RECORD asked me to write something about the Gennadeion Library.

I think I shall have to seek sanctuary by reporting the dedication. That was an imposing affair. There were over a hundred accredited delegates from American and foreign Universities and societies. At least seventy-five were there.

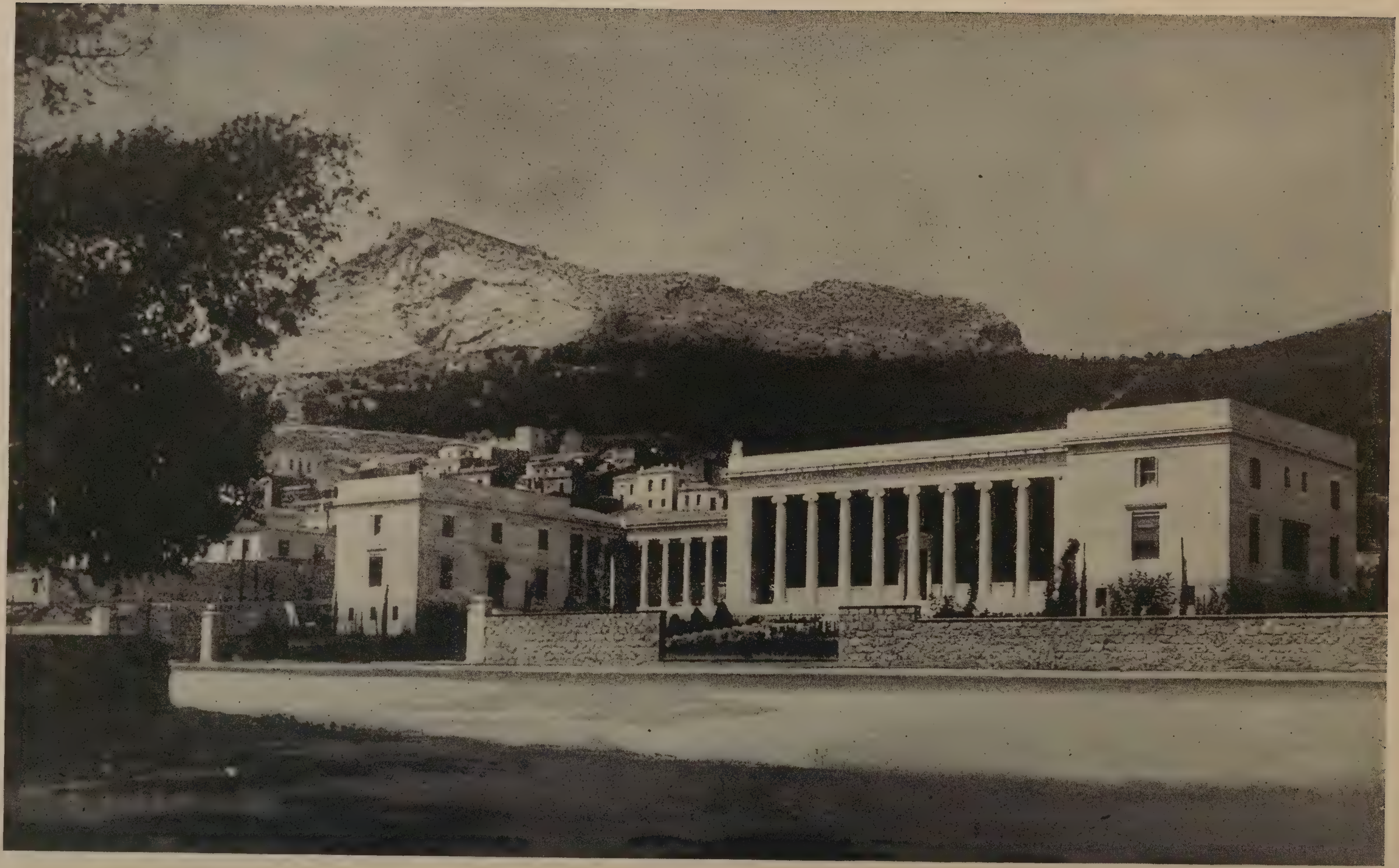
Dr. Pritchett represented the Carnegie Foundation, Dr. Finley was representative at large of the American Universities. General Pangalos, then President of the Greek Republic, occupied the seat on the right hand of Judge Loring, chairman of the Board of Trustees of the American School of Classical Studies.

The head of the University of Athens delivered an address in such pure classical Greek that no one could understand it. This was partly true of Dr. Gennadius' address, for only half of it was in English. Anyone who knew any Greek at all was able to understand everything the President of the Republic said in conferring the gift of the land.

Everyone was impressed by Dr. Pritchett's remarks, the keynote of which was "Personality," illustrated by the differing characters of those who had been the instruments in bringing the library into existence—Dr. Gennadius' father, Dr. Gennadius himself, the wife who had helped him assemble the books and manuscripts and Mr. Carnegie who was the indirect donor of the building.

This collection of works is the most important in the world as far as Greek civilization, literature and history are concerned. It is a library of rarities and of beautiful binding, both old and new. The last address on the program of the dedicatory exercises was an enlightening description of the collection by the able and erudite librarian, Dr. Scoggin. In addition to the fulfillment of his duties as custodian and information bureau, it is his purpose to delve among the treasures committed to his care and to transcribe or translate and give to the world information that has remained locked away from it for centuries between covers that earlier stewards only opened for their personal pleasure or were too lazy or ignorant to open at all.

In one respect the ceremonies at Athens were unusual. A painting is known primarily as a Raphael or Millet or Corot before it is described as the Madonna della Sedia or The Gleaners. We hear of Whistler's Portrait of his Mother. Advertisements of the movies tell first the names of the impersonators, the author, the director, even the camera man. In architecture the names of the donor, the owner and often of the contractor are blazoned abroad. Usually that of the architect is discreetly omitted. It was not so in the case of the Gennadeion and the two architects had nice places in the front row near the President of the Re-



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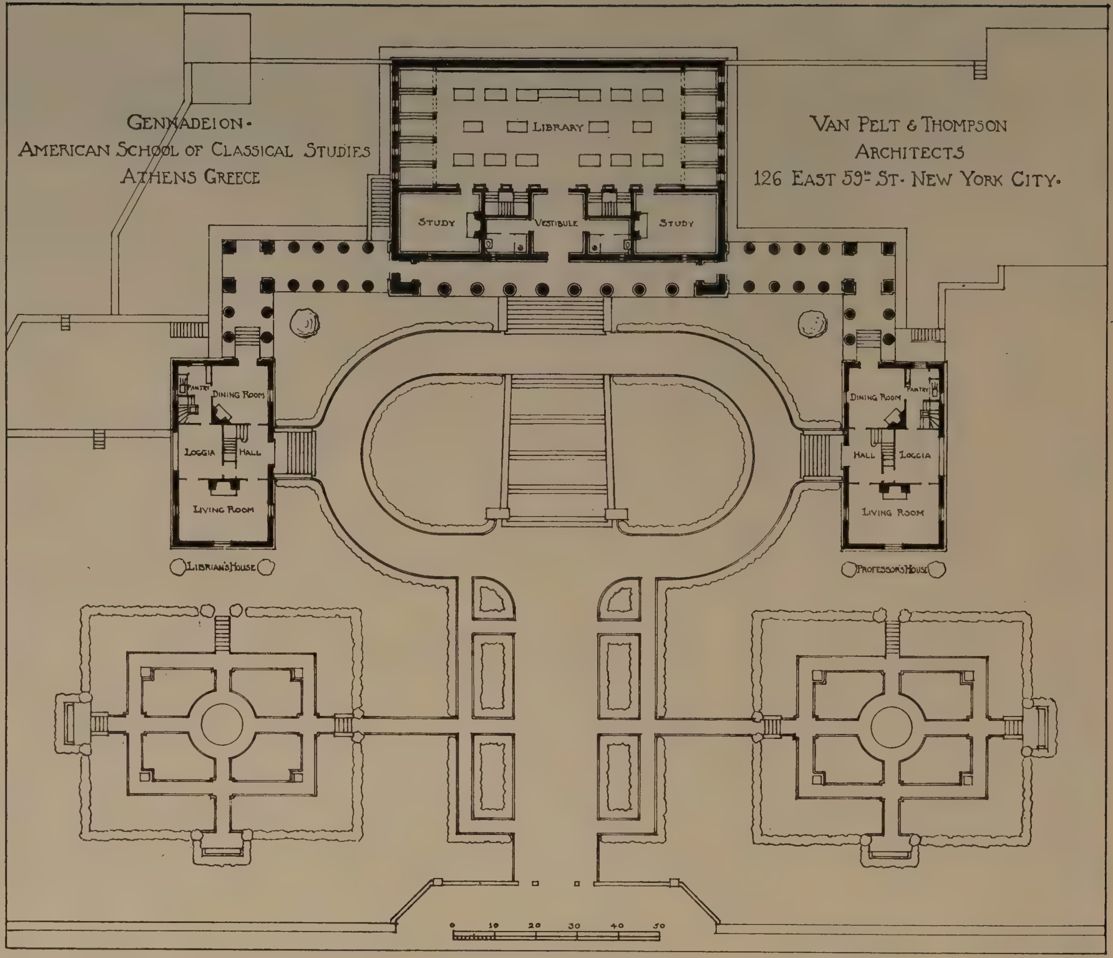
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LIVING ROOM
LIBRIAN'S HOUSE
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10
20
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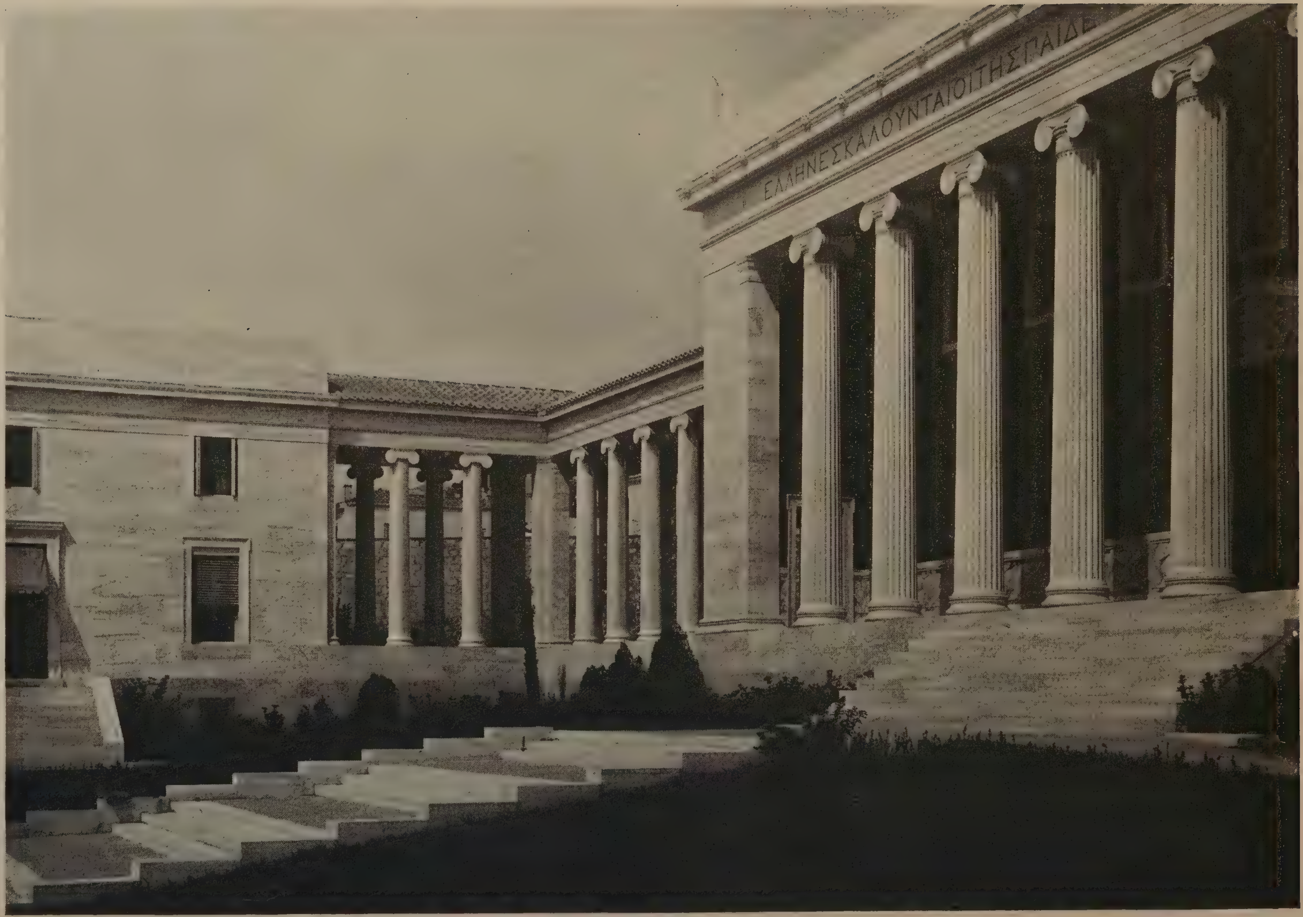
40
50



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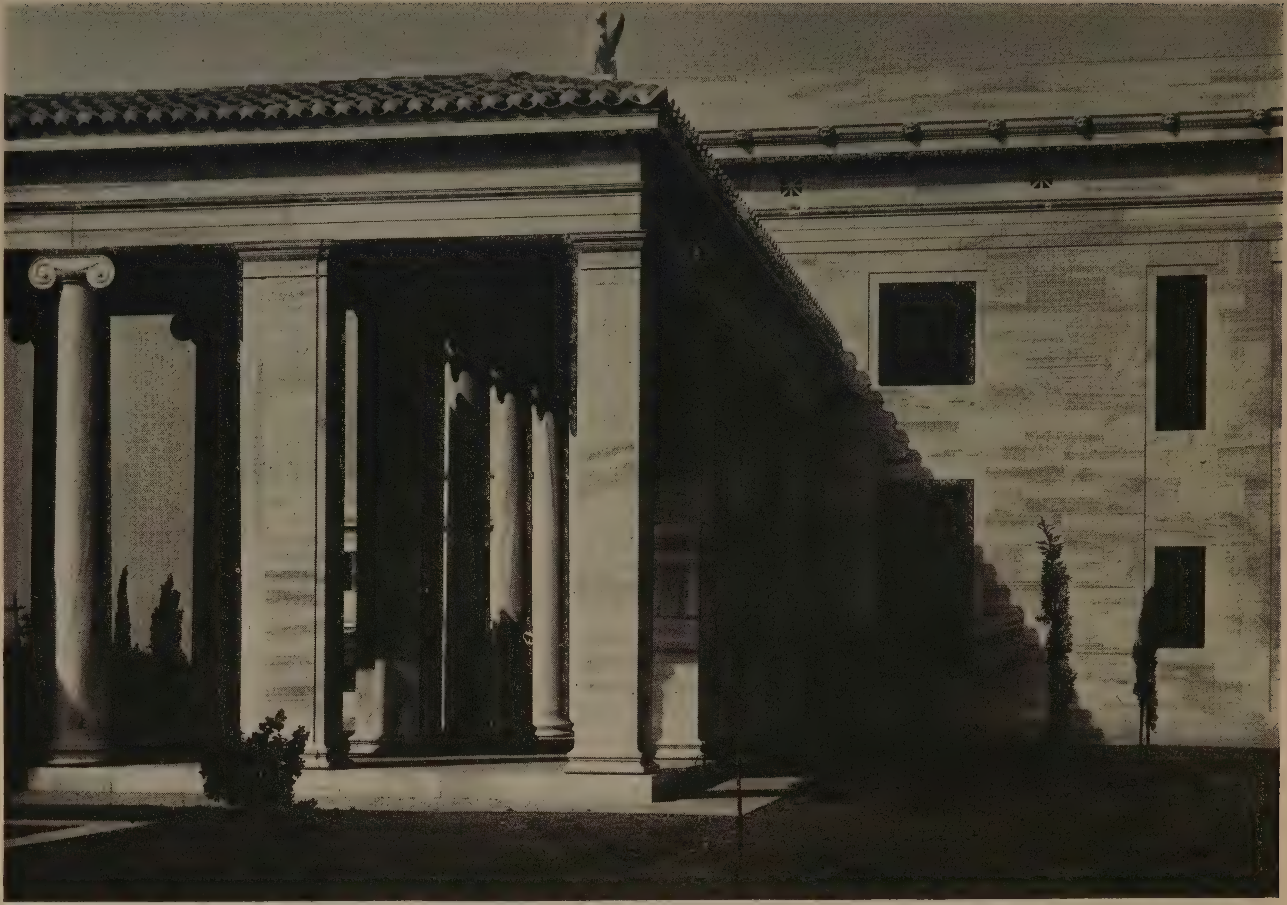

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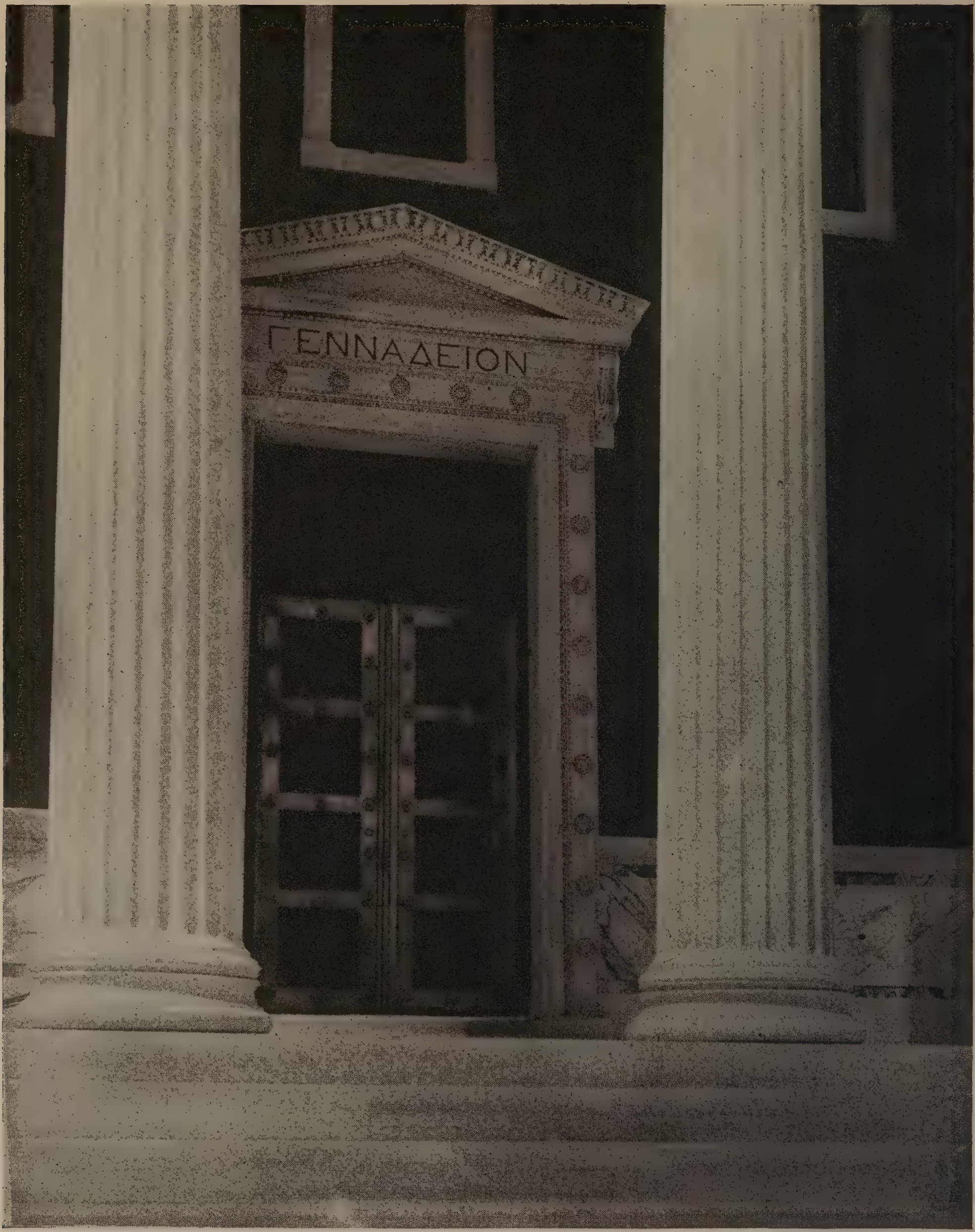

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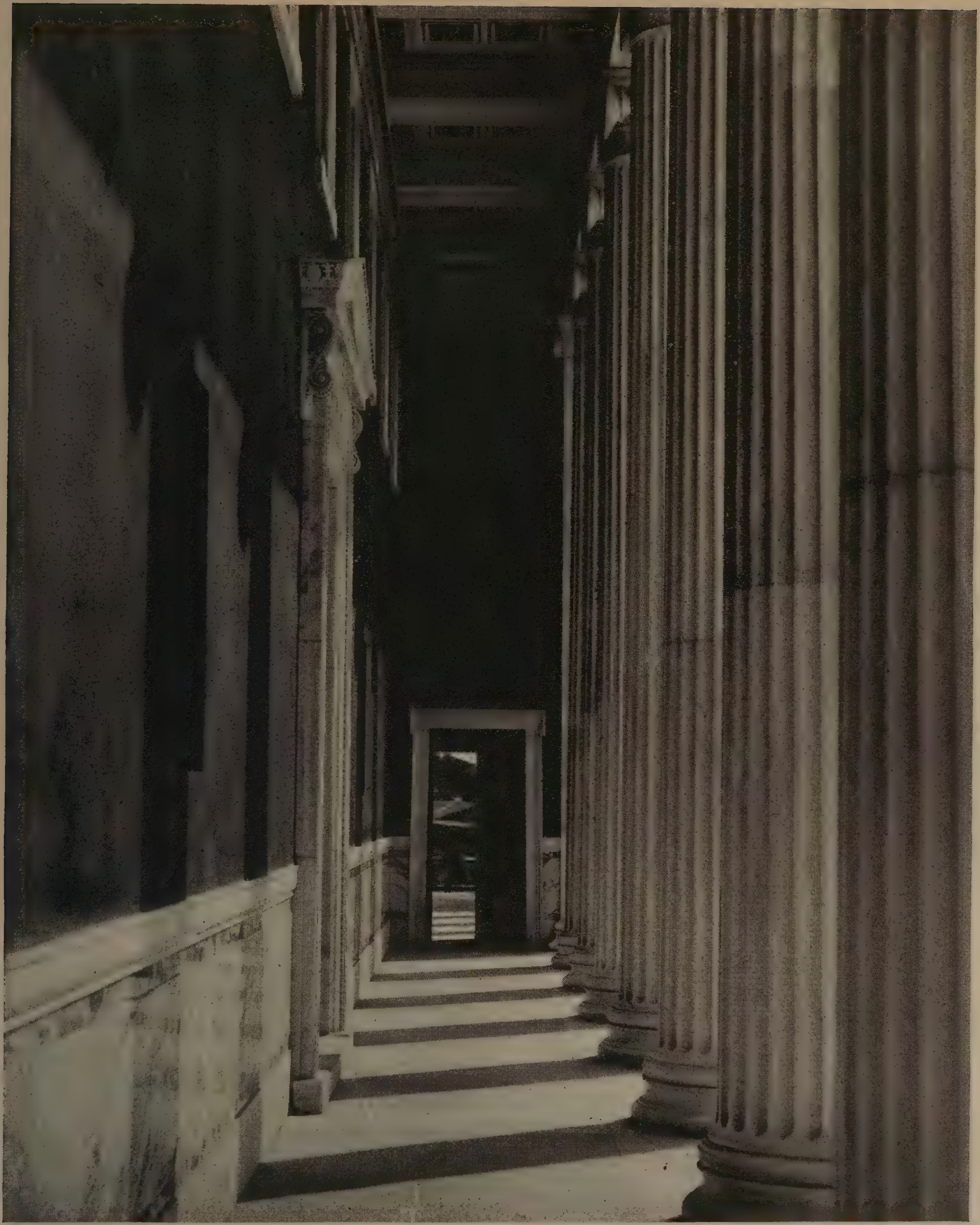

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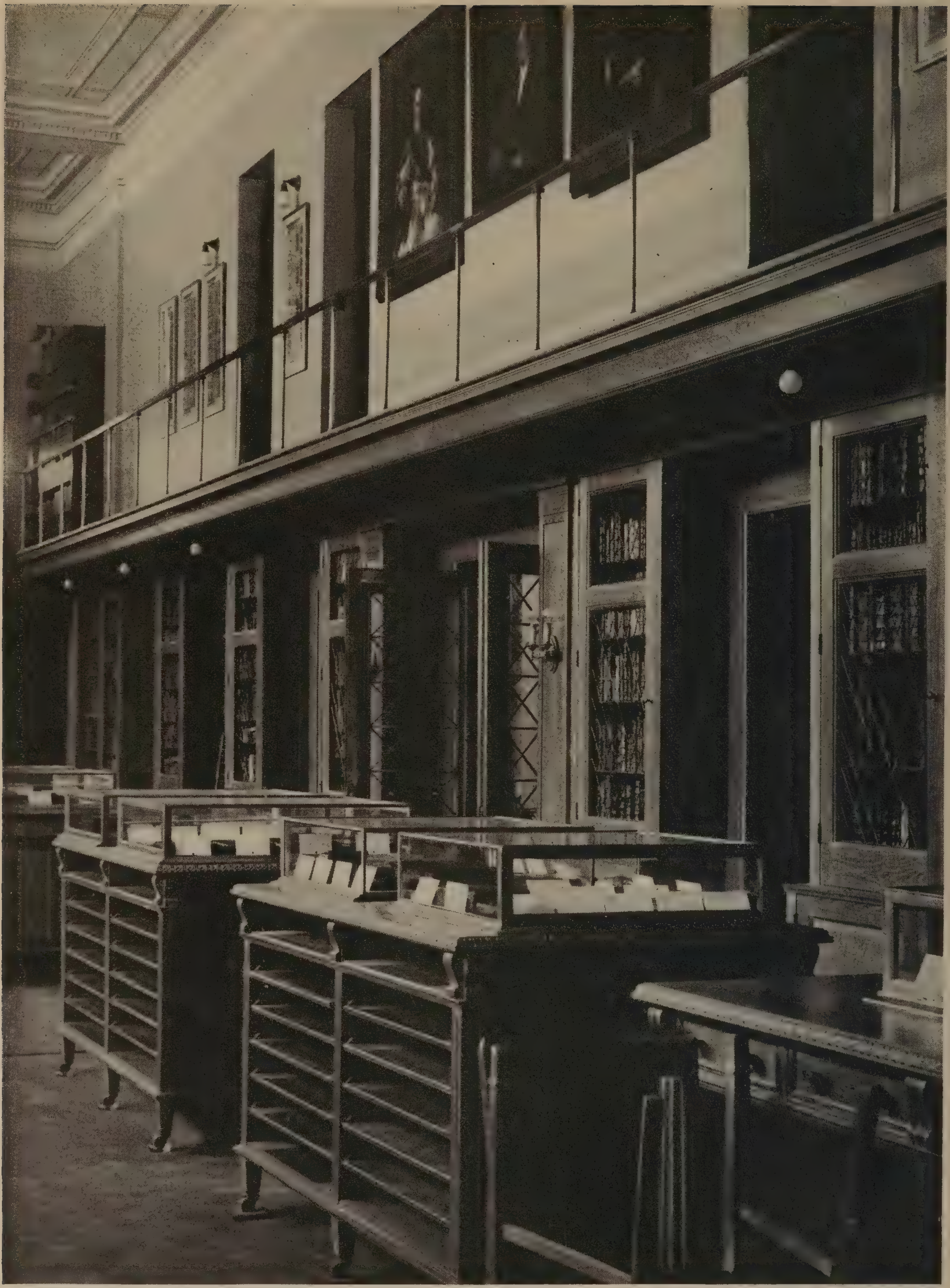

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public and heard nice things about the building. During my whole stay in Athens one criticism (I am glad to say it was the only one) was repeated to me. It has a technical import that may be of interest. The chairman of the board of trustees and the treasurer, anxious to see the structure at the earliest possible moment, went from the ship that brought them to Athens, to the library. It seemed smaller than they had expected.

In designing the building my prime motive had been to so gauge the scale and feeling of the building that it would be in entire harmony with the Greek architecture of 440 B.C., the architecture that still plays such an important rôle in controlling the artistic expression of Athens. This in spite of the fact that our building was in no sense a copy of the temple form, had a different purpose, and, in my estimation, should not be an archæological essay. In view of this we made the columns of the main orders only a few inches taller than those of the East Porch of the Erechtheum. With the stalwart columns and the great dimensions of New York's modern monuments and more gross commercial architecture fresh in their minds, the restrained dimensions and delicate scale of the Gennadeion came as a shock to these gentlemen. Fortunately for us the impression was temporary, for the next day they went to the Acropolis.

I think the episode worth noting because it suggests two or three possibilities. Perhaps our modern scale in America is becoming exaggerated. Certainly it throws out of gear that of the past, the City Hall of New York, of charming Colonial buildings elsewhere, of buildings in other styles modelled on the smaller scale of mediæval predecessors. It is undoubtedly one of the things that makes the New York Public Library, a building of really considerable dimensions, appear so ladylike. It harbors an inherent danger, for although it helps to guard against effeminacy, it reacts against the very thing it is intended to promote, harmony with structures of great size, and prevents a realization in the observer of that very greatness of size of the building.

If our modern American scale is wise and correct, another possible deduction is that buildings, conceived in the scale of the past, no matter how charming or in keeping with relative human sizes, should not be built in centers where the new relation obtains. And this opens up the interesting question, whether the architecture of different localities in our own country should not have different scales. If that obtained, what would be the effect of passing rapidly from one place to another? How about the National American Architecture of which we hear so much?

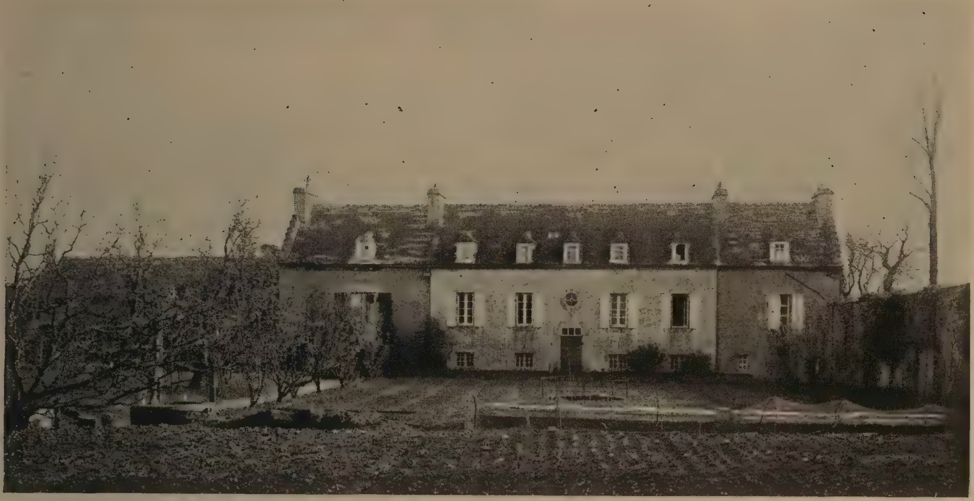
The Gennadeion group consists of the main library connected by porticos with a residence for the librarian and one for the Annual Professor. Estimates taken in the United States placed the cost, if built by an American contractor, at nearly a million and a half dollars. The amount of money actually paid out for American material, or in Athens by Stuart Thompson, my partner in the enterprise, was about a quarter of a million, including the steps, garden walls, landscape work and an artesian well. The exterior is of marble from new quarries at Naxos, except that the main column drums are Pentelic. Nothing better could be found anywhere than the native Greek carvers, and the use of refugees on coarser labor helped to keep down the expense. Of course, the steel, trim, bronze grilles and other manufactured material came from the United States, wholesale or export prices being accorded on account of the nature of the enterprise. The Greek government allowed their importation duty free. The total width of the group is 186 feet 6 inches and if one counts the porticos and porch solid there are in the buildings 283,472 cubic feet.

The library has an unusually fortunate location across the axis of a street (named in memory of Samuel Gridly Howe) that runs up toward Licabettos from an important boulevard that might be called Athens' residential Fifth Avenue.

Following Dr. Pritchett's lead, it seems to me I cannot close these desultory remarks without a word about two outstanding "Personalities," of the inspiring enterprise of the construction of the

Gennadeion library. Dr. Joannes Gennadius, son of a Greek patriot, formerly envoy as Ambassador to the United States, is a gentleman with the courtly charm of the continental aristocrat, the lovable nature of a Longfellow and the erudition of a Hawthorne. Throughout his long life he has had and has indulged a serious vice. He is a book lover. Succumbing to the temptation, a weakness inherited from his father, he has collected all the rare books bearing on Greek culture. His English wife has abetted him in this, despite the trying times imposed by disquieting ups and downs of Greek finances. With no children of flesh and blood, together they bequeathed these other children to the American School of Classical Studies on condition that an adequate building be erected to house them. This the Carnegie Foundation patriotically and generously made possible.

When Dr. Gennadius proffered his gift, he wrote to Professor Edward Capps, chairman of the Managing Committee of the School. Hercules would have been daunted by the proposal to procure a new library building in Athens for the American School of Classical Studies without funds, without land. Capps proved dauntless and this second "Personality" is one of whom I think too little was said at the dedication. Within six weeks he had so marshalled his forces and presented his case that the gift of the building was assured. Within a similarly short period of time the Greek government had promised the land. Throughout the whole operation it is his tireless energy that has smoothed out seemingly insurmountable obstacles, has drawn warring opinions into accord and has kept everyone at work. Without him it is almost certain that there would have been no library.



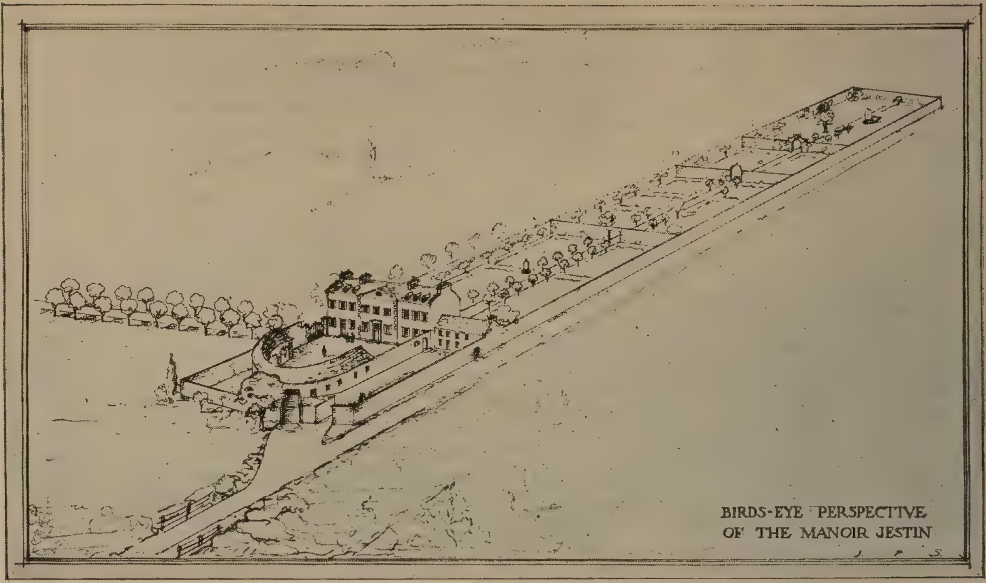
A Manor House of Old Brittany
The Manoir Jestin, near Kerinou

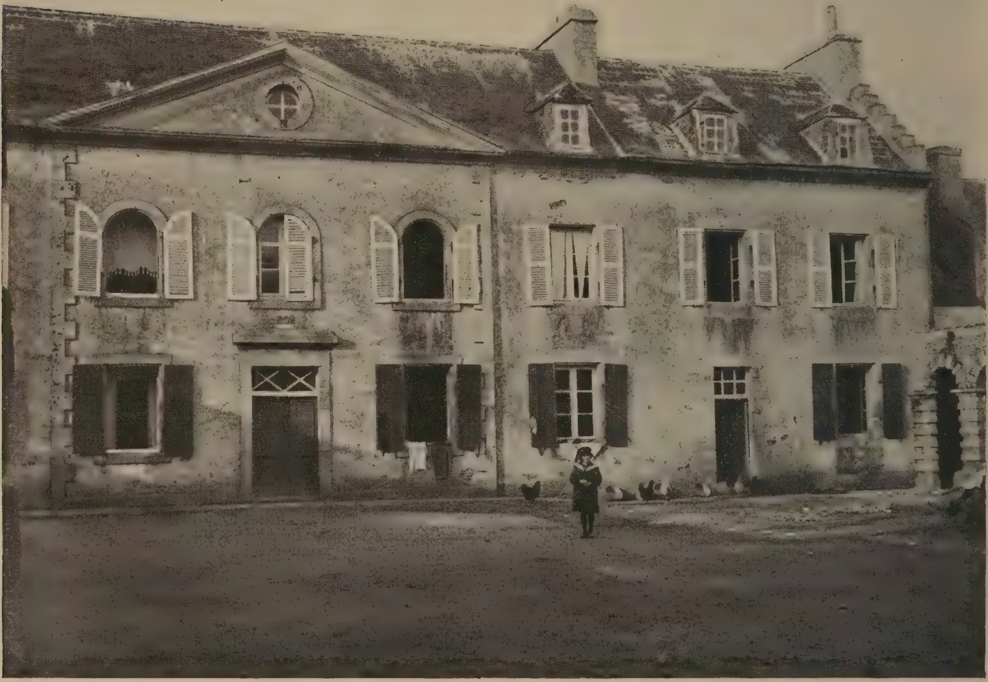
By
Joseph Patterson Sims

A FEW MILES EAST of Brest, near the village of Kerinou and in the commune of Lambezellec, lies the Manoir Jestin. Although architecturally unpretentious, the general scheme of the house in relation to the grounds, gardens, etc., is an excellent example of that privacy so beloved by the French, and is of sufficient interest to repay study.

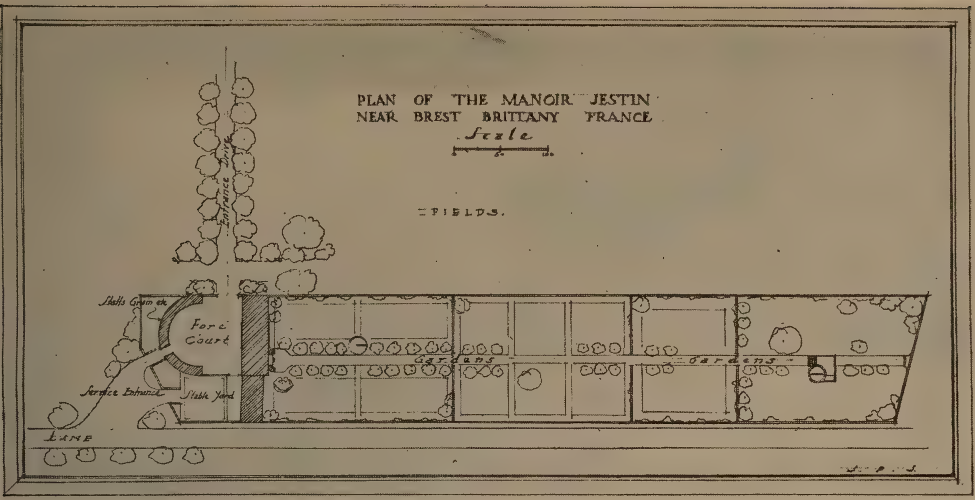
On the subject of its history little is known, as all papers concerning it were destroyed during the Revolution of 1789. It is probable, however, that it belonged to one of the rich families of Brest, who made it their home at least during the summer season and in all likelihood it belonged to that Admiral Bouet who was in possession immediately following the Revolution. The name it now bears is that of its present owner.

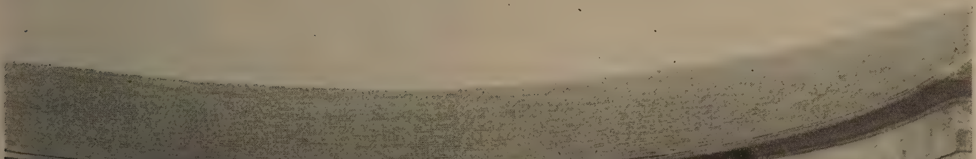
The grounds are quite extensive, and touch the village of Bellevue, which lies midway between Kerinou and Penfeld. Leading from the Bellevue road the house is approached by a formal avenue a quarter of a mile long, with a wrought iron gateway giving entrance to the forecourt. On the other side there is a service entrance through the low stables which form the semi-circular forecourt. These stables are attached to the house by high walls. The long line of the two-story façade runs the full width of this forecourt. Stepped gables, reminiscent of Holland, cover the ends of the low-pitched roof. In the center a low gable breaks the



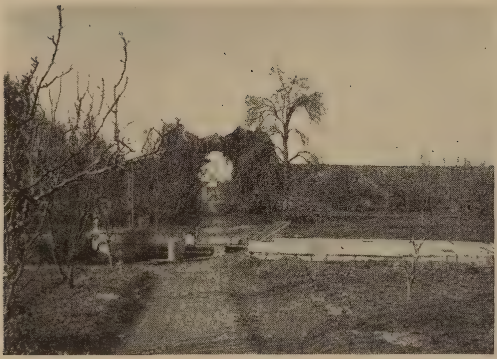


FACADE OF THE MANOIR JESTIN, NEAR BREST, BRITTANY





DETAIL OF THE CIRCULAR STABLES, MANOIR JESTIN, NEAR BREST, BRITTANY



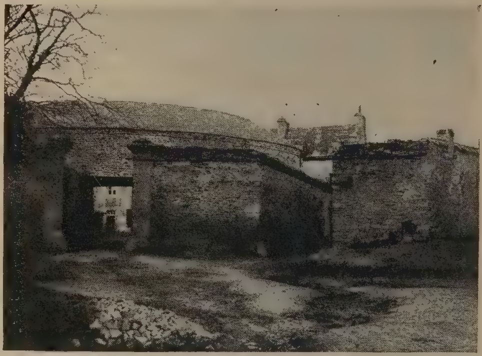
View from upper end of garden, the Manoir Jestin, near Brest, Brittany

façade, carrying up from the slightest of projections in plan.

At the back a circular stone staircase with iron railing leads down to the axis of a garden that runs back more than 900 feet. The axis of the forecourt and the gardens are not the same, the added width of the outbuilding adjoining the house causing the difference. The garden, which is about 130 feet wide, is bounded by high walls coped with flat stone.

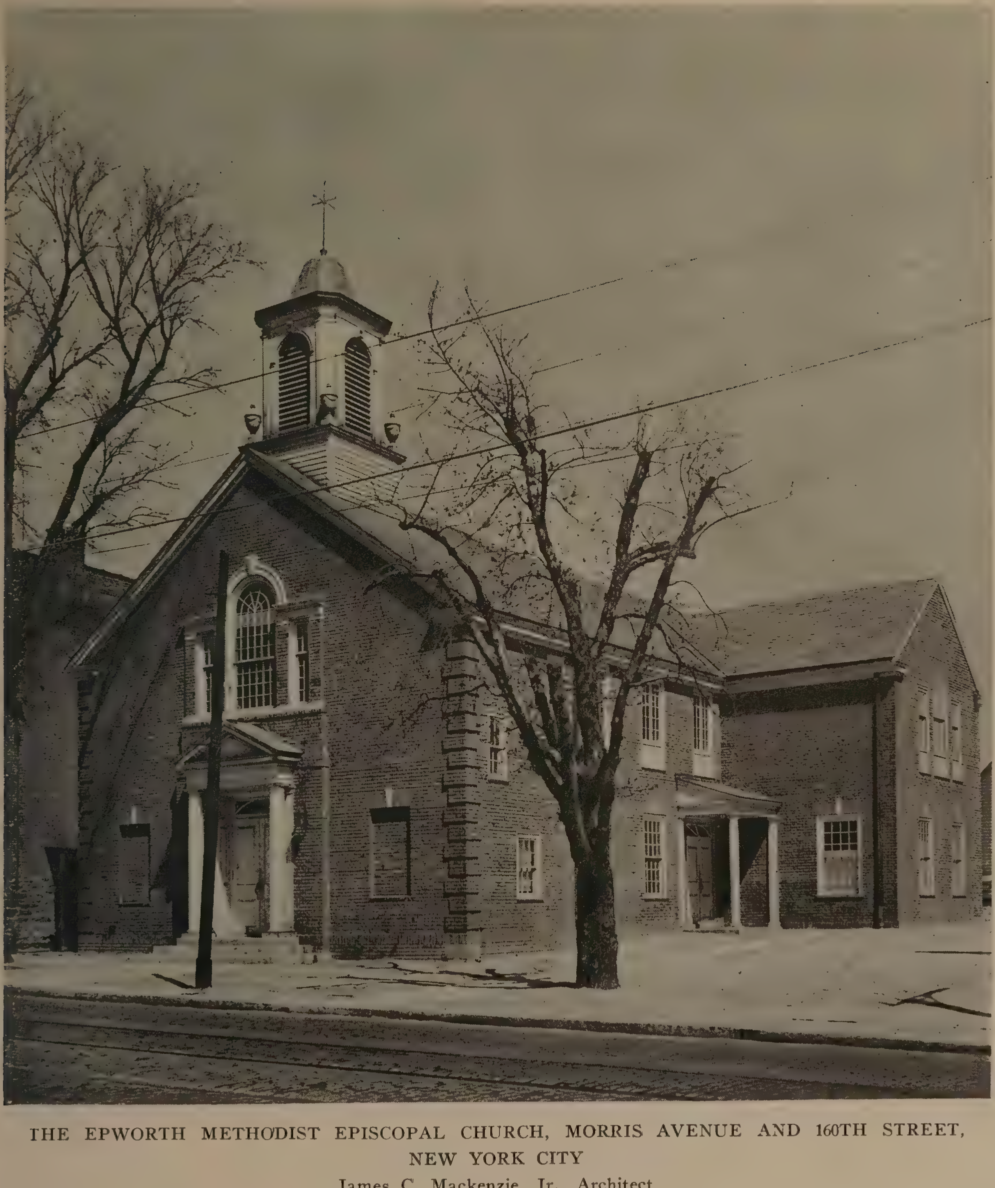
The gardens are divided into four parts by equally high walls, with picturesque arches over gateways of various treatments on the axis. The central path, following the axis throughout the full length of the garden is bordered by fruit trees and its monotony is broken at intervals by wells, none, however, directly in the path, but all slightly to one side. Larger trees here and there afford shade and the garden walls themselves are covered with fruit trees, *espalier*.

The house, the dimensions of which are 25 feet by 100 feet, has been so altered by recent tenants, several families of farmers, that its original plan is almost lost. The walls of the house are plastered, with only the stone sills, window and door trim and quoins on the projecting gable to give it variety, while the free-standing garden walls and the walls of the stable have been left unplastered and furnish a fine example of the local methods of stone work.

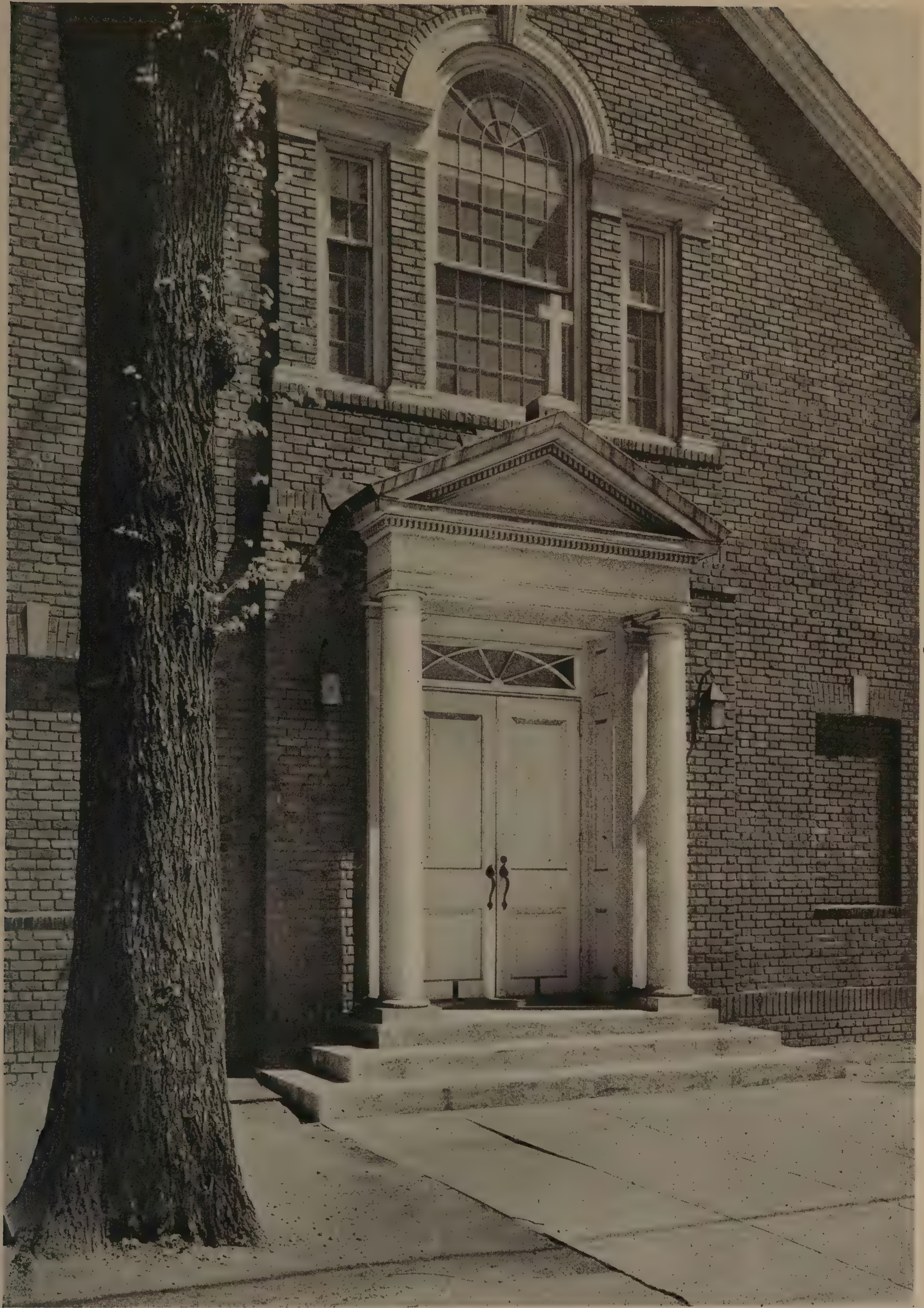


Service Entrance of the Manoir Jestin, near Brest, Brittany

A PORTFOLIO OF CVRRENT CHVRCH ARCHITECTVRE



THE EPWORTH METHODIST EPISCOPAL CHURCH, MORRIS AVENUE AND 160TH STREET, NEW YORK CITY
James C. Mackenzie, Jr., Architect



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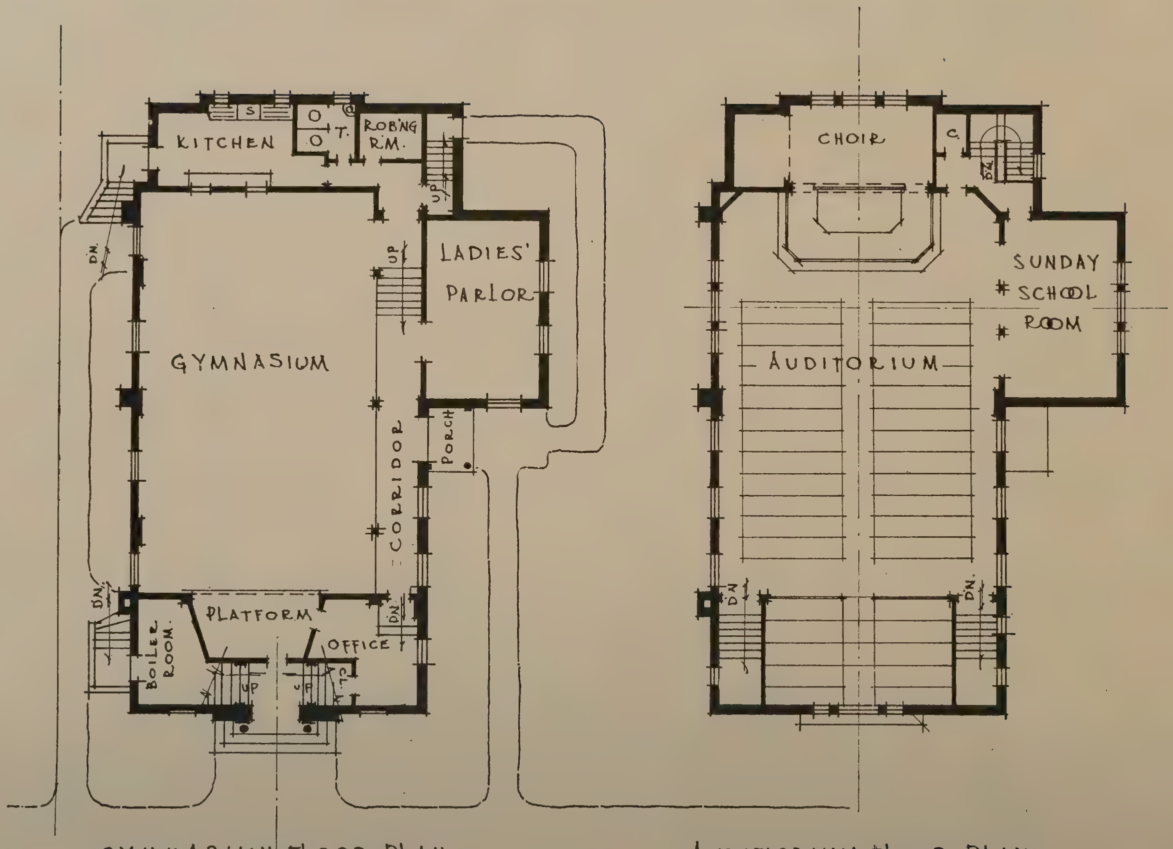

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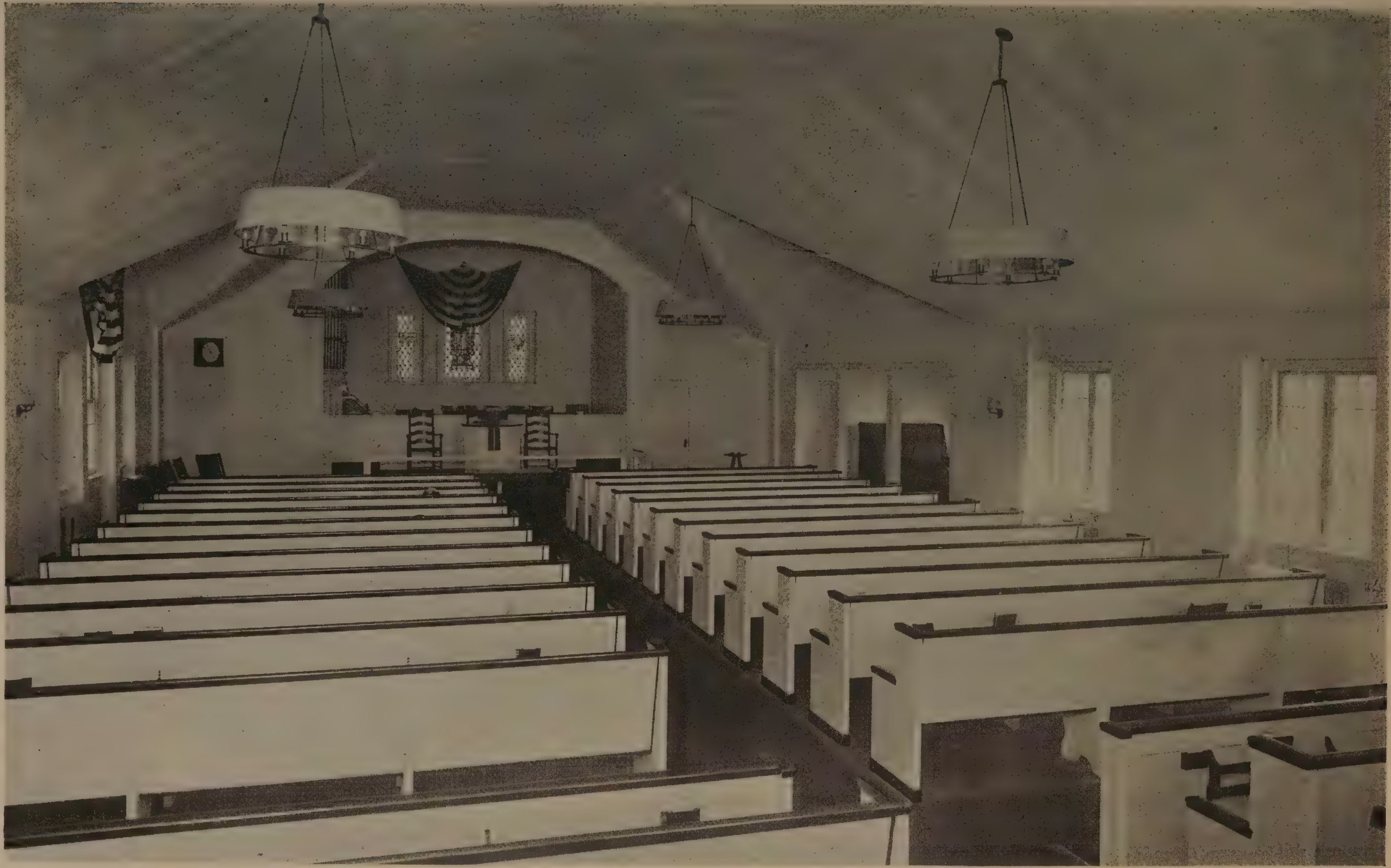

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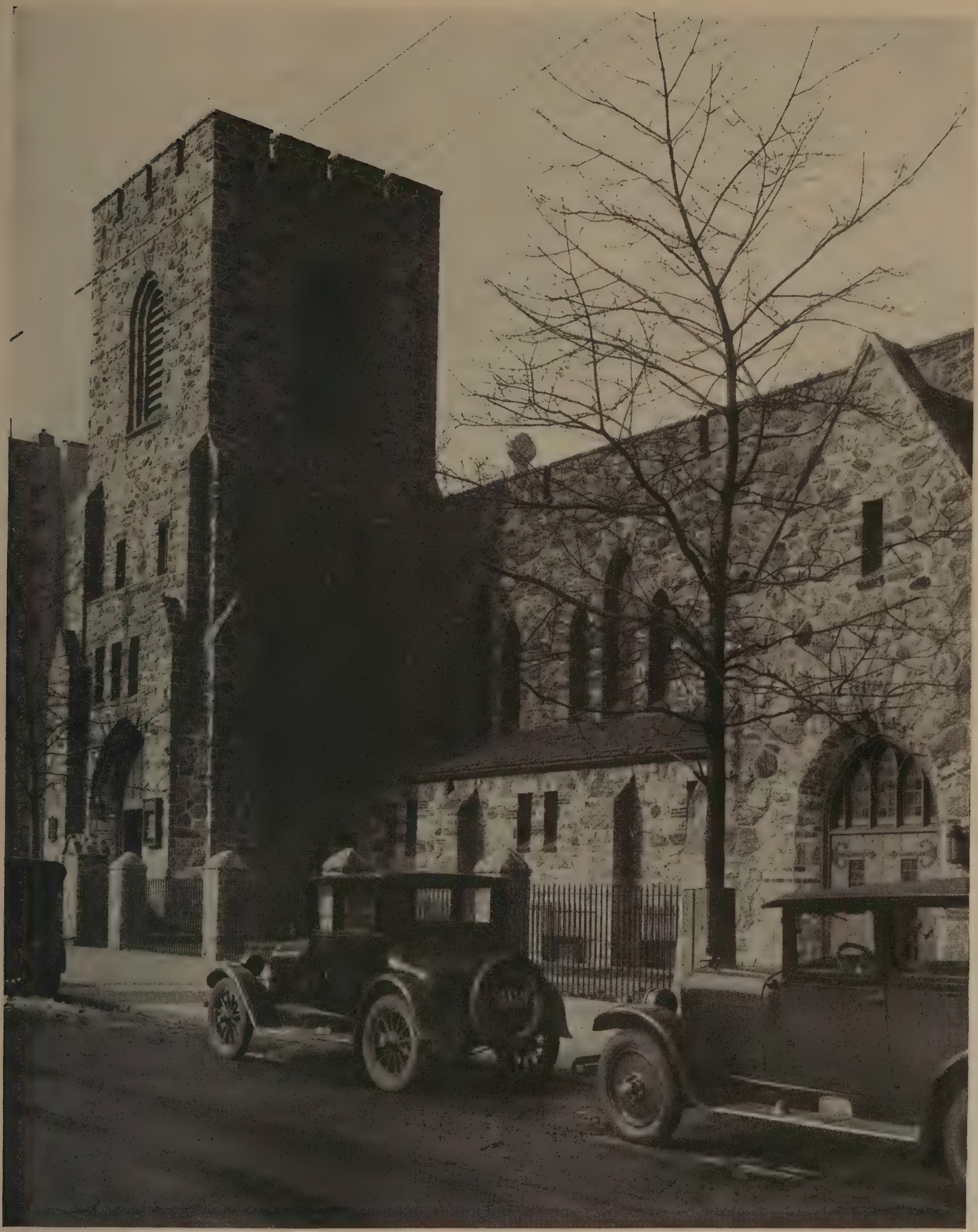
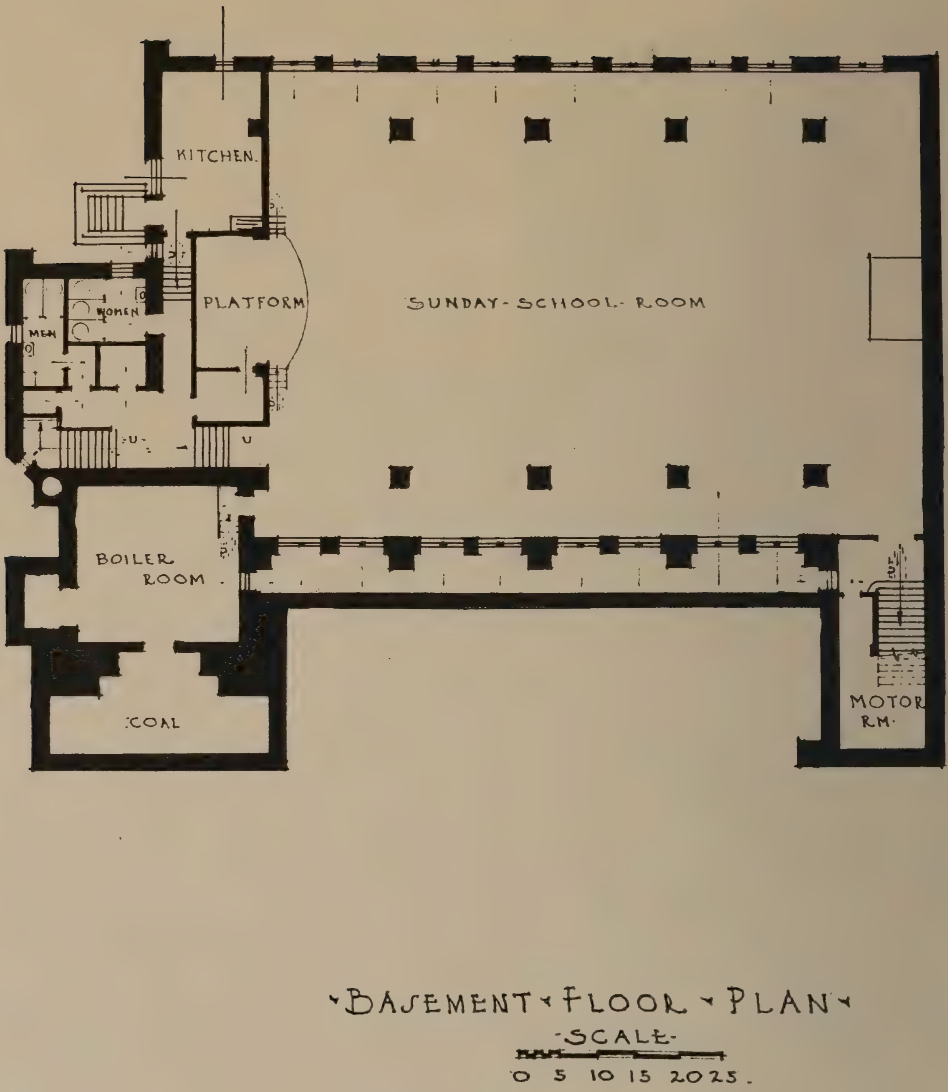


THE CALVARY METHODIST EPISCOPAL CHURCH, BOROUGH OF THE BRONX, N. Y.
Julius Gregory, Architect



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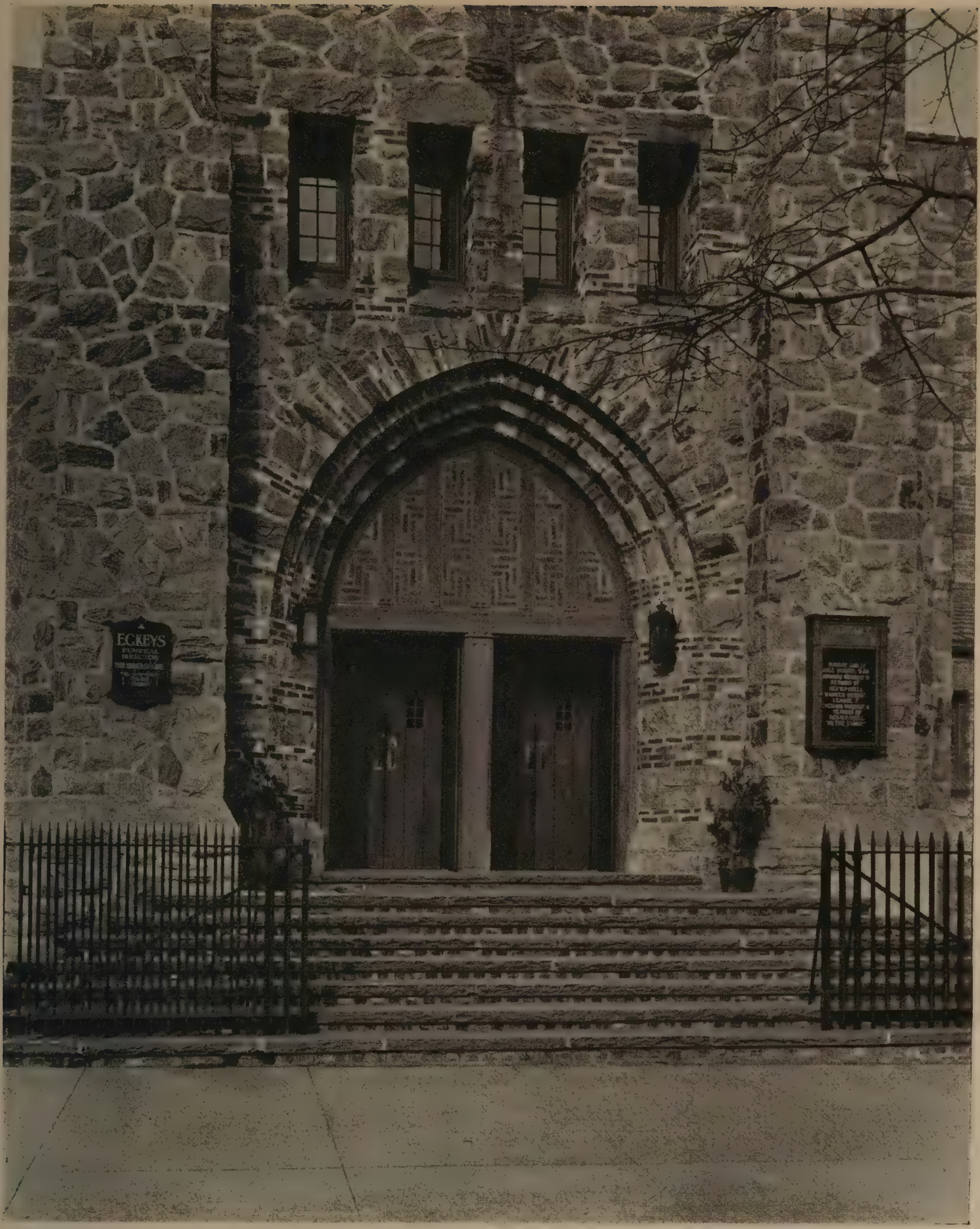

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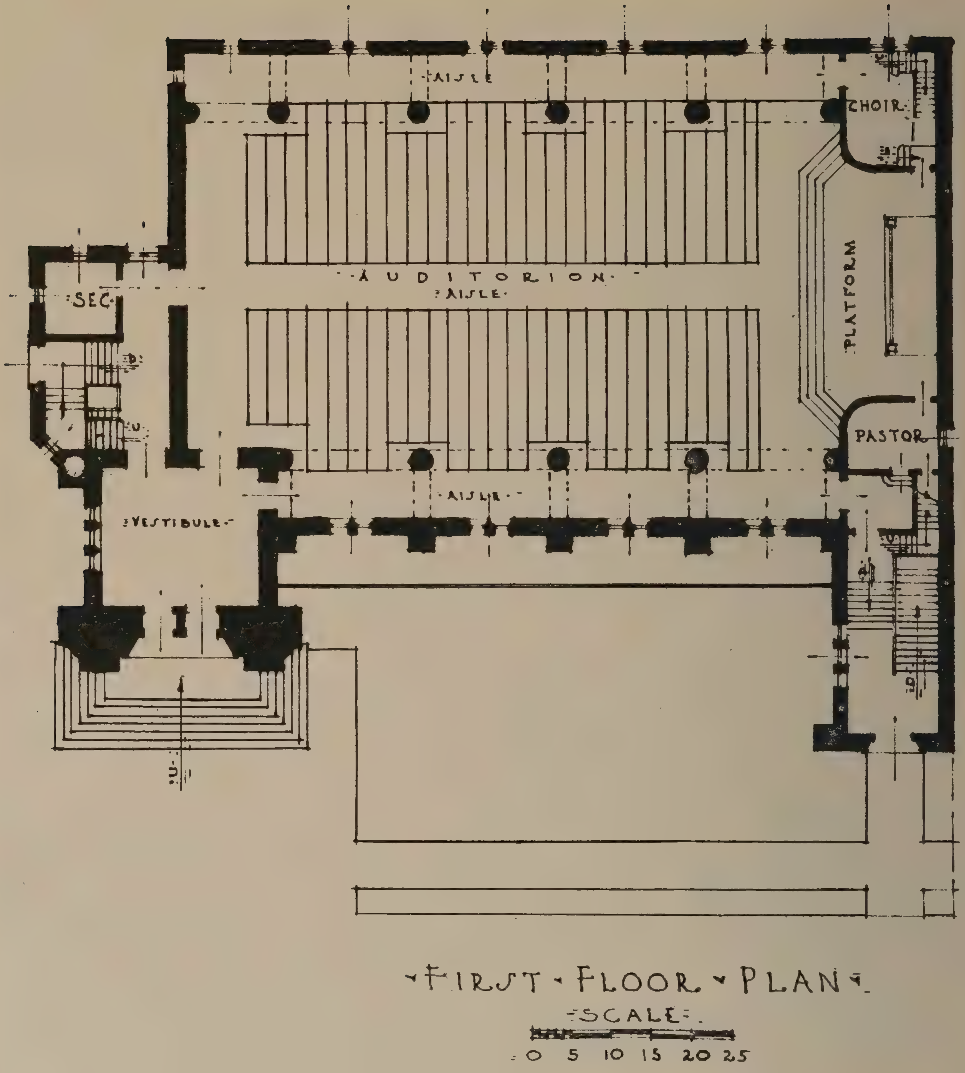

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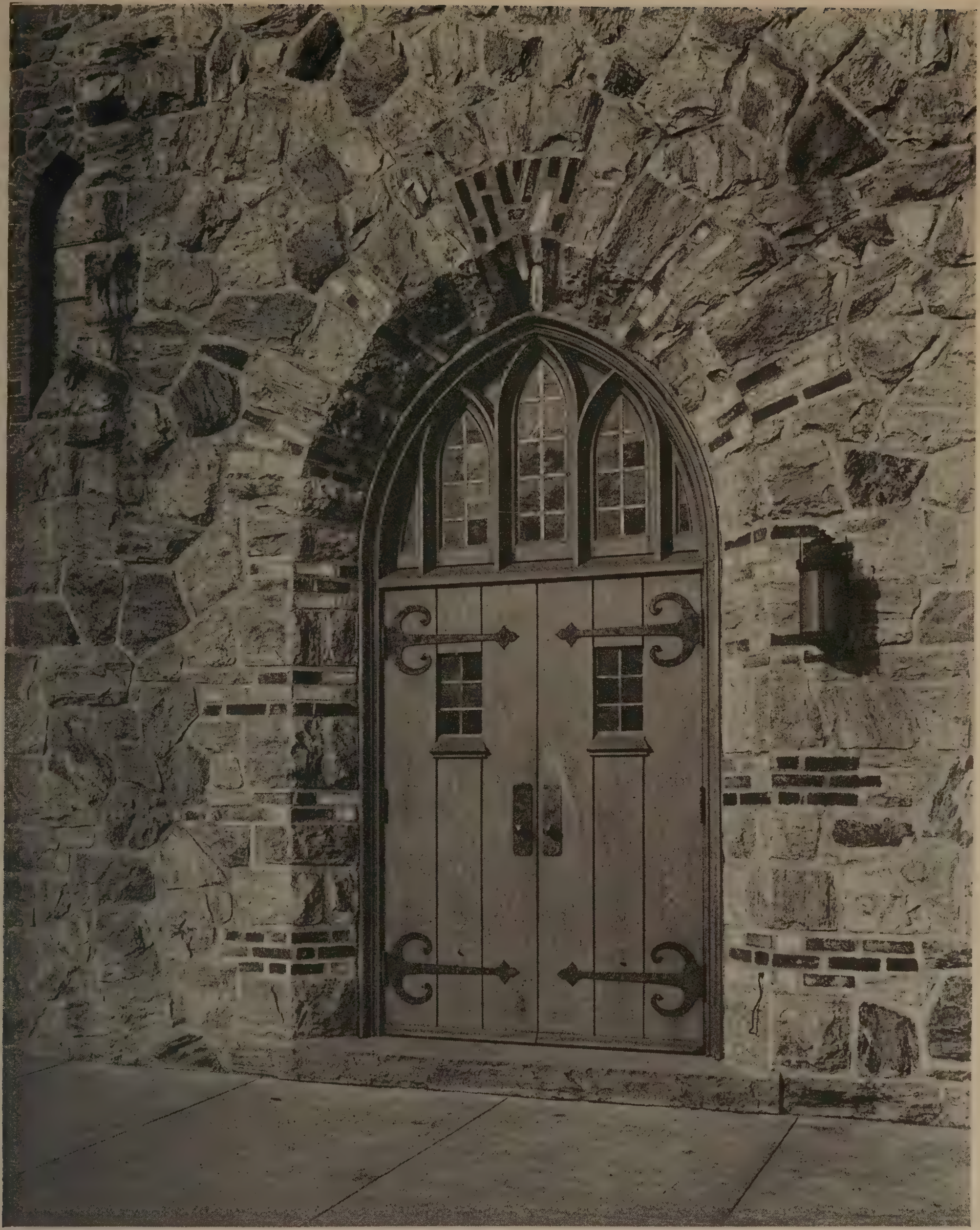

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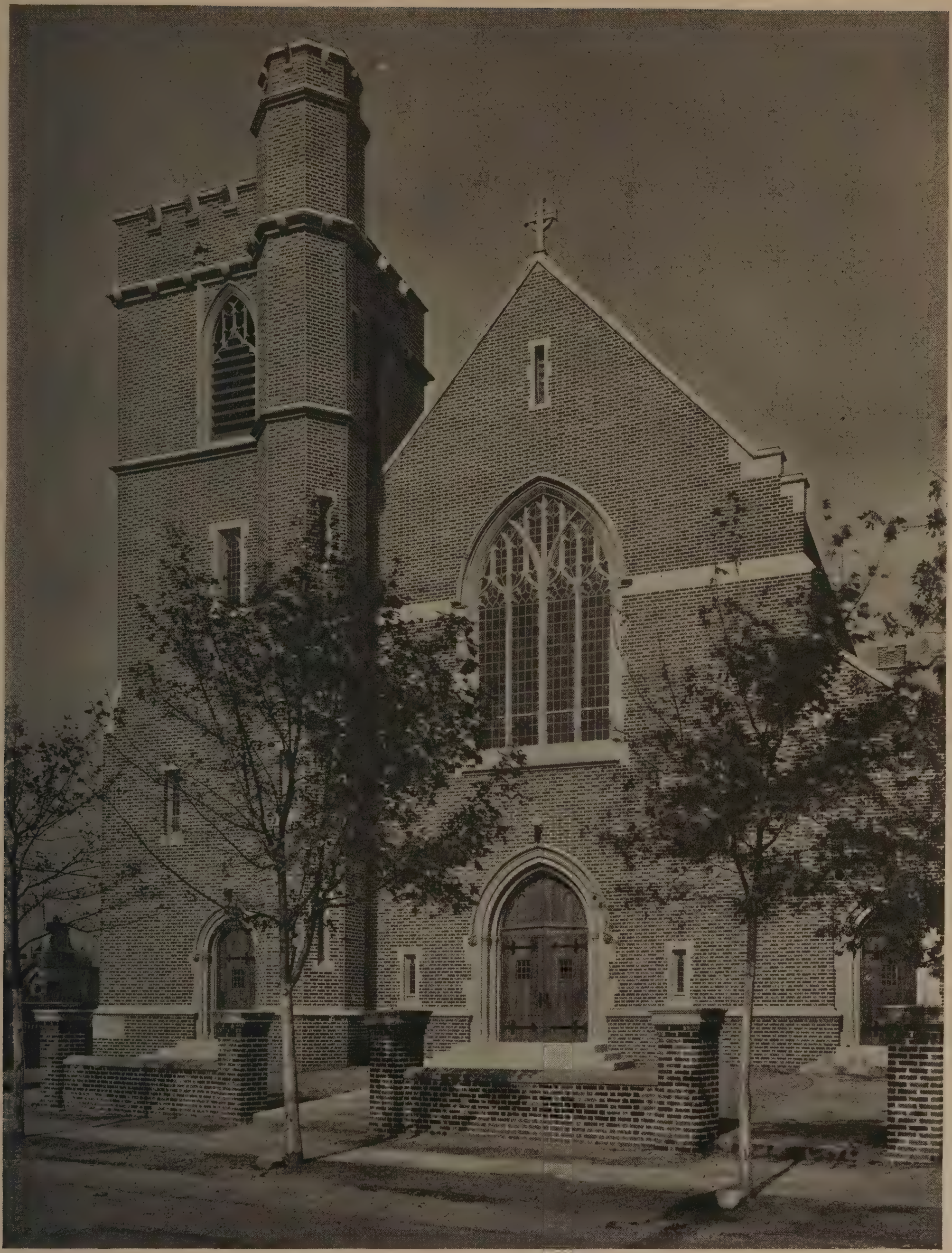
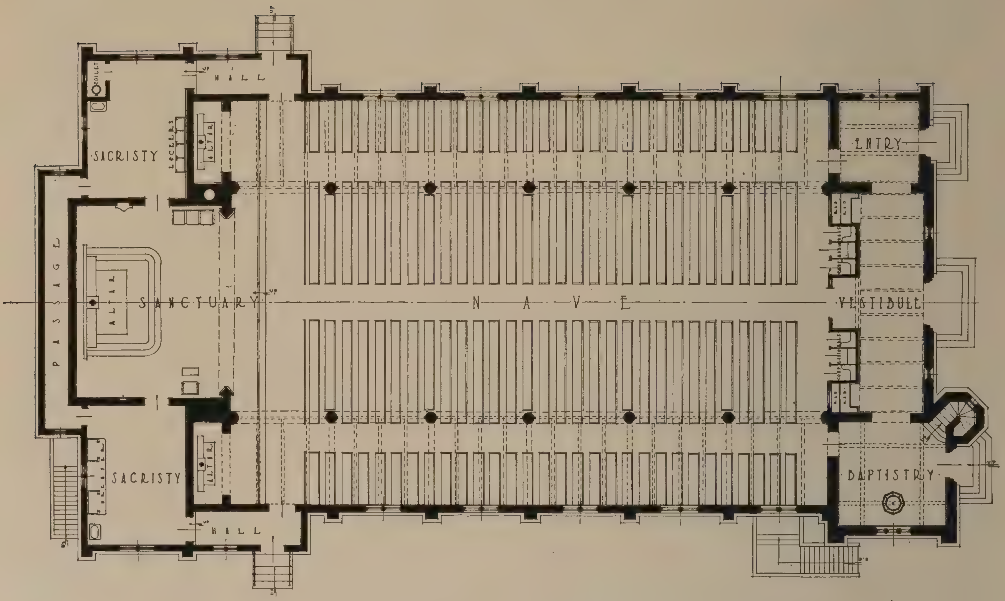
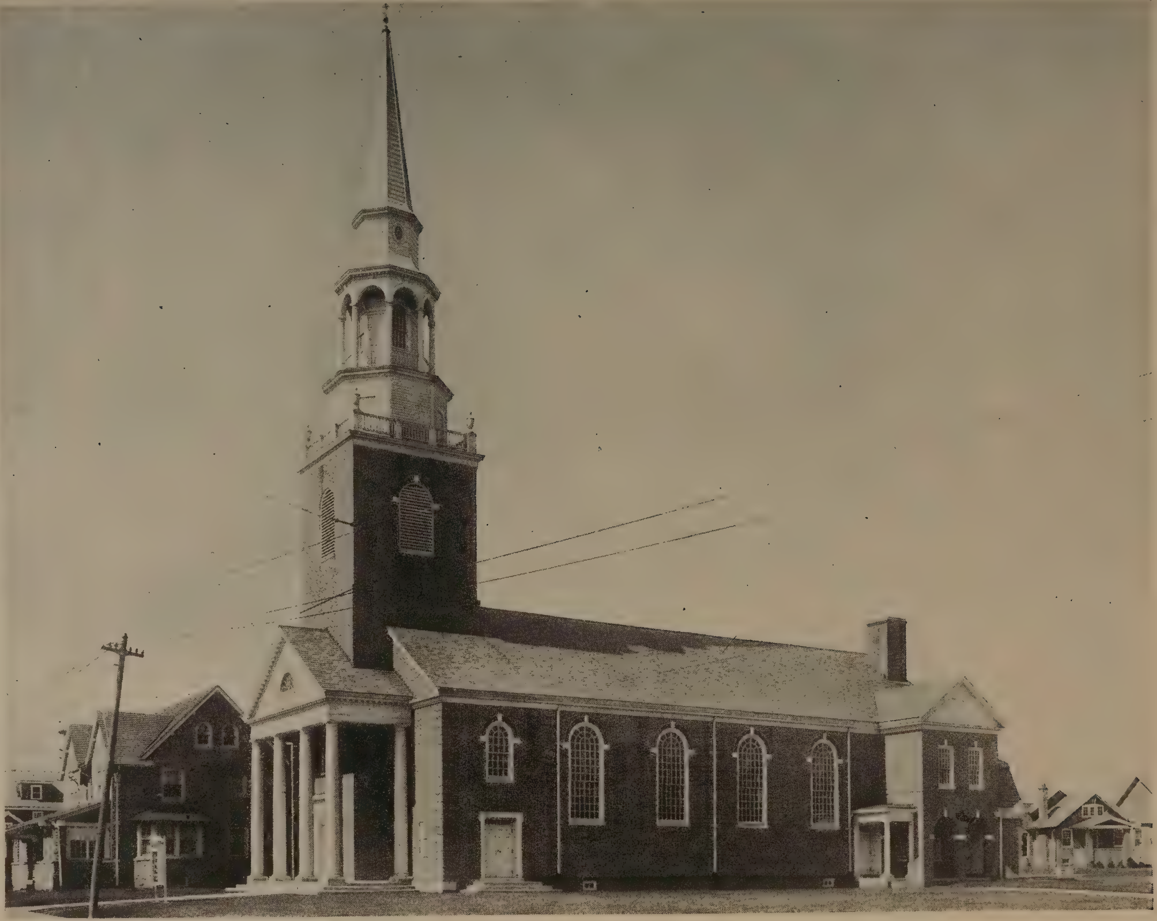


ST. CLEMENT POPE CHURCH, BOROUGH OF QUEENS, N. Y.
Robert J. Reiley, Architect

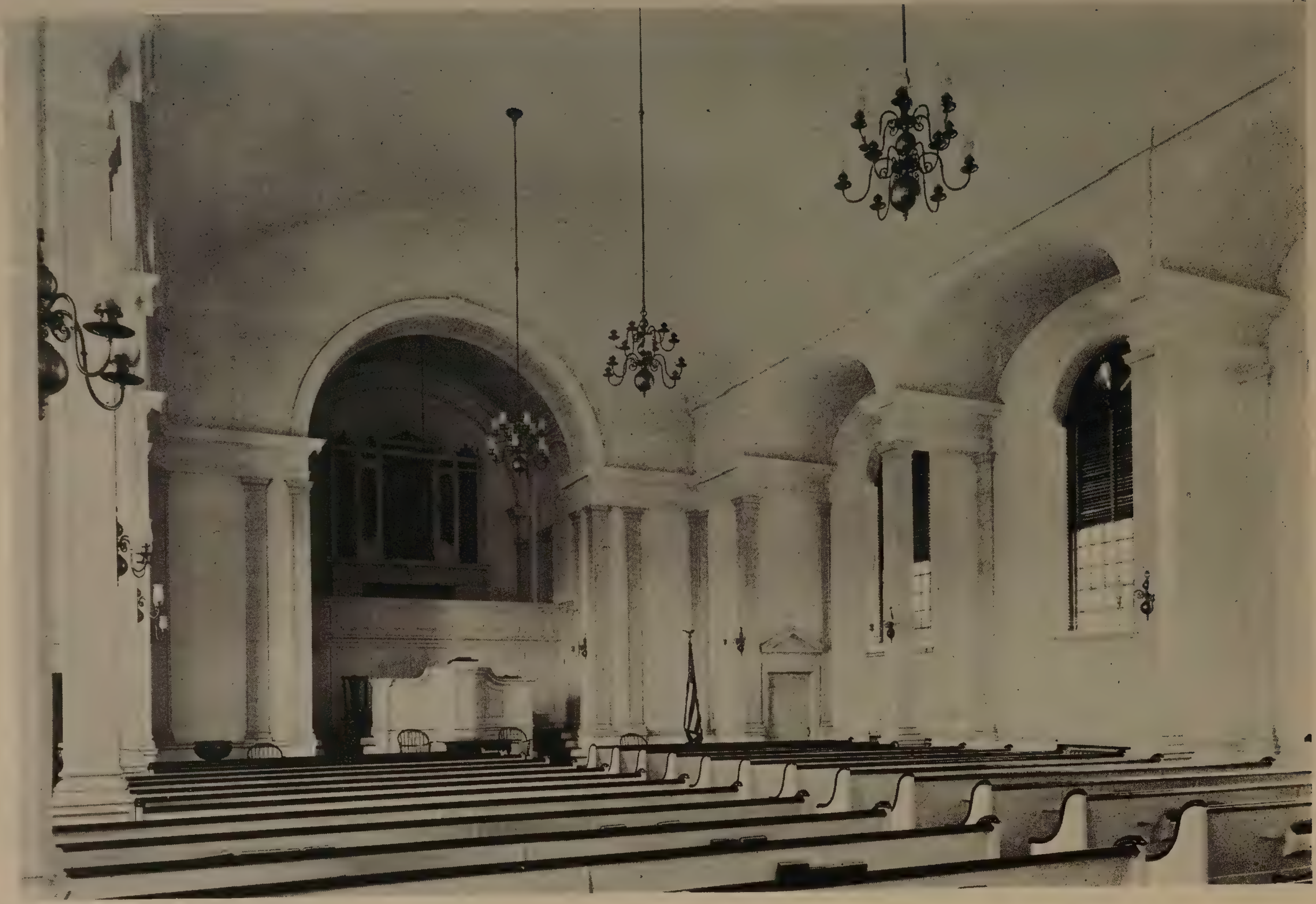


FIRST FLOOR PLAN

ST. CLEMENT POPE CHURCH, BOROUGH OF QUEENS, N. Y.
Robert J. Reiley, Architect



FIRST PRESBYTERIAN CHURCH, CHESTER, PA.
Clarence W. Brazer and Frohman & Robb, Associate Architects



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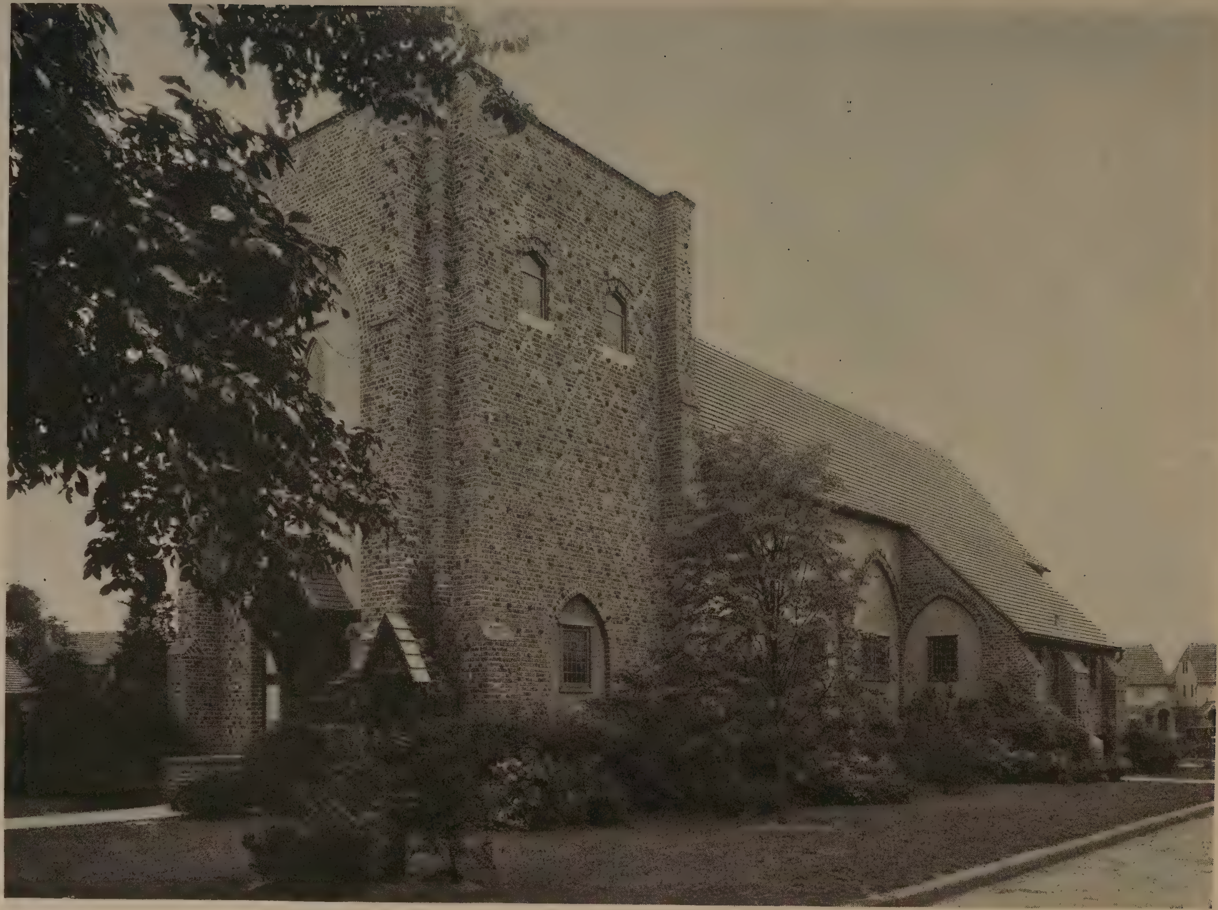
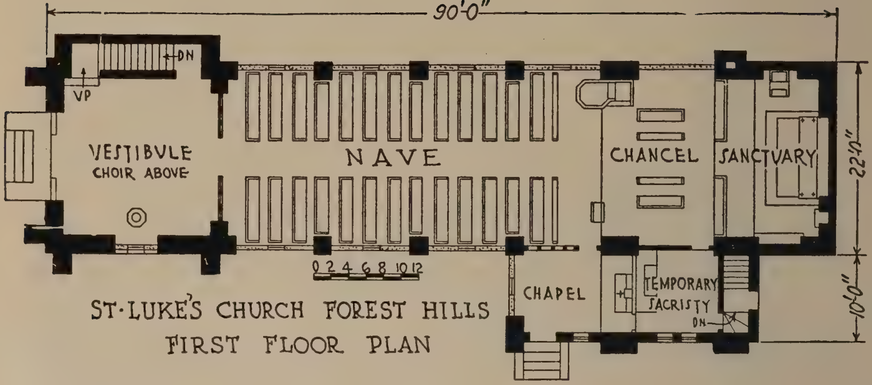
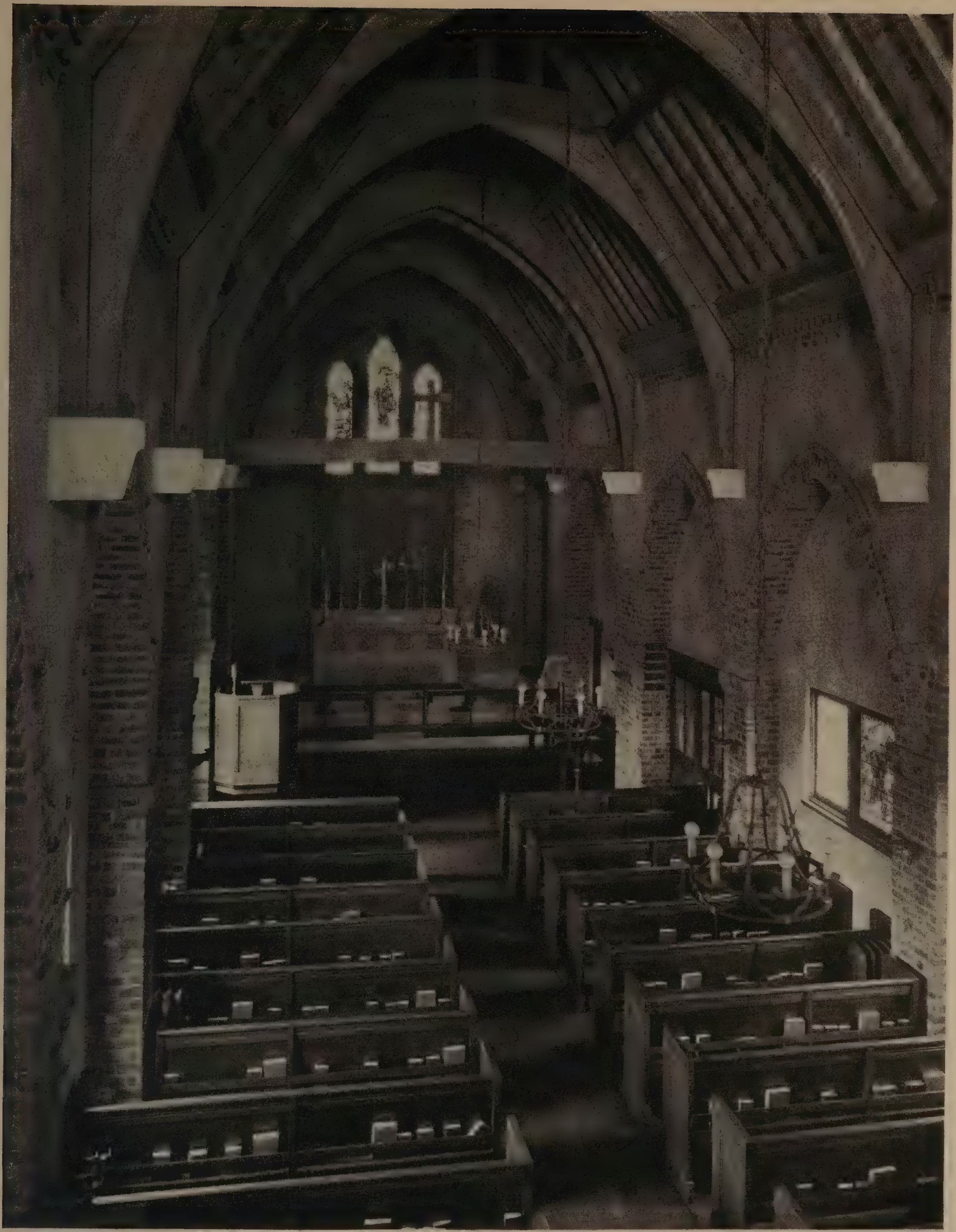


ST. LUKE'S CHURCH, FOREST HILLS, L. I.
Robert Tappan, Architect



Robert Tappan, Architect



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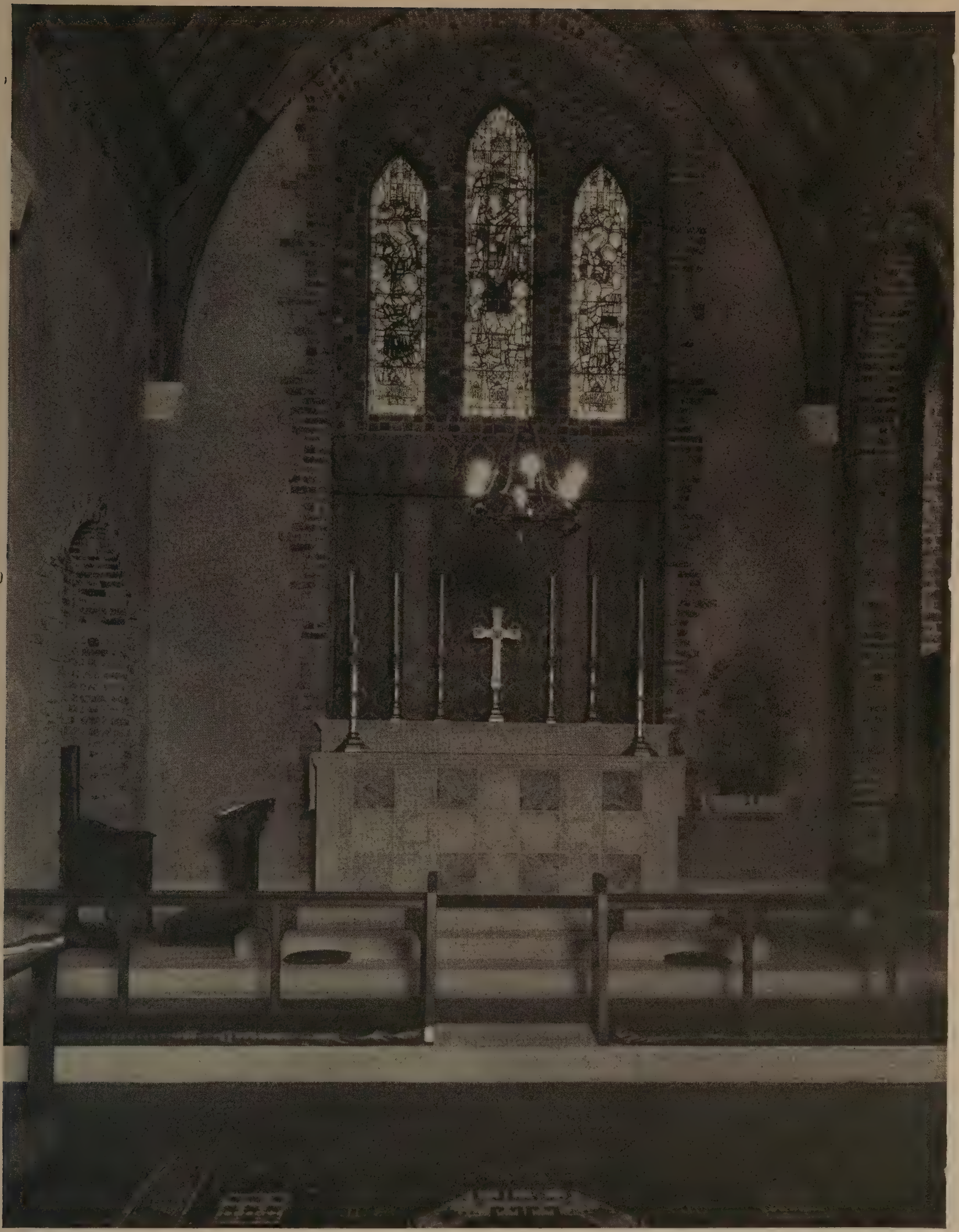

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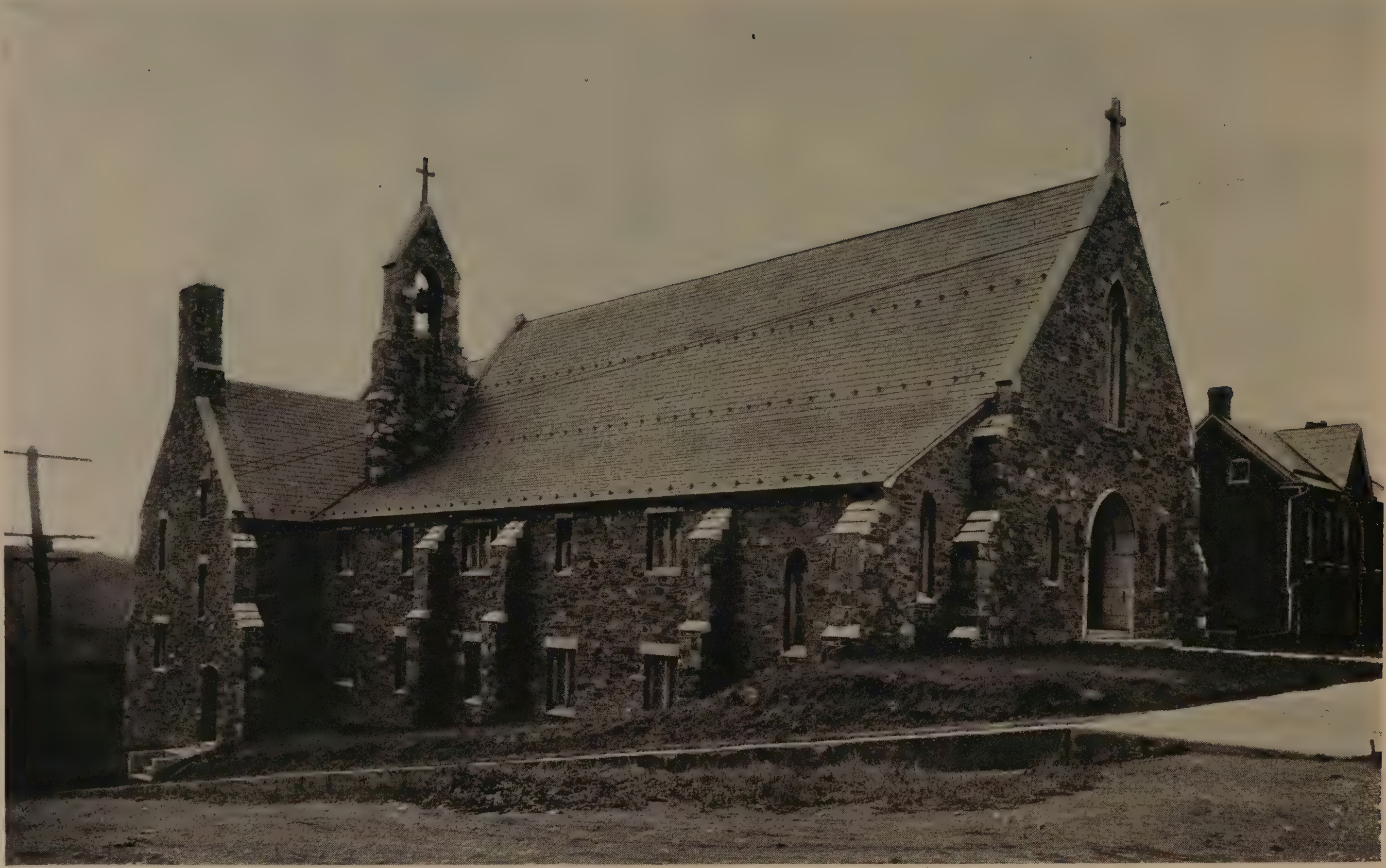
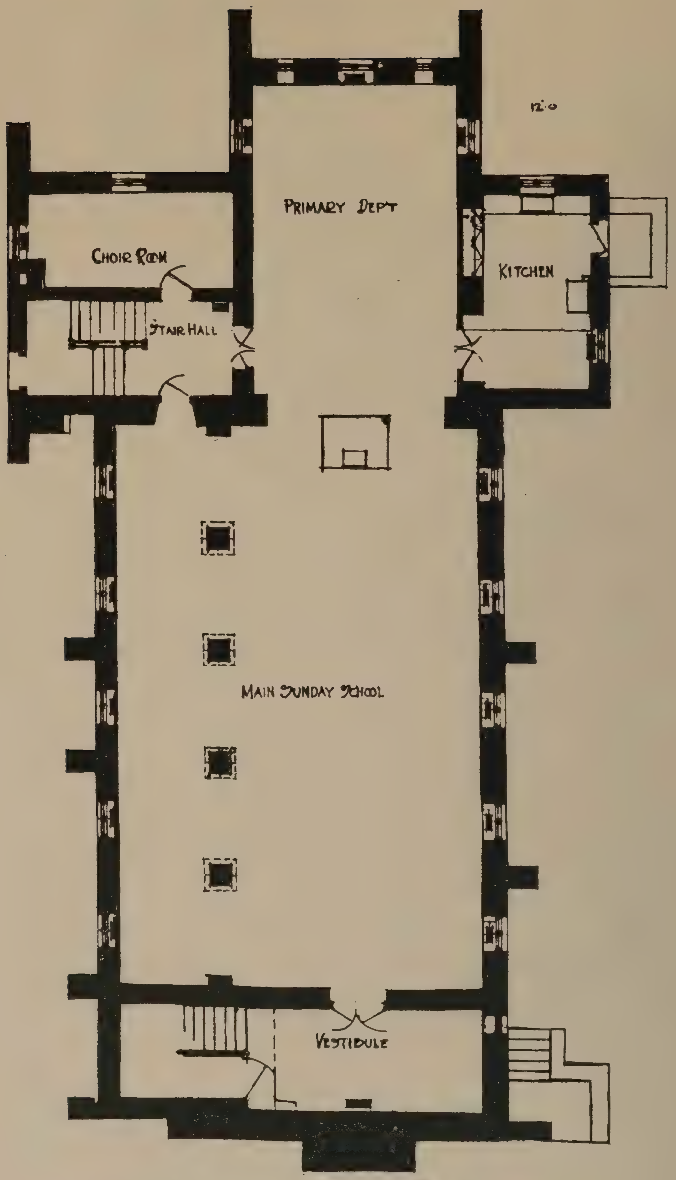
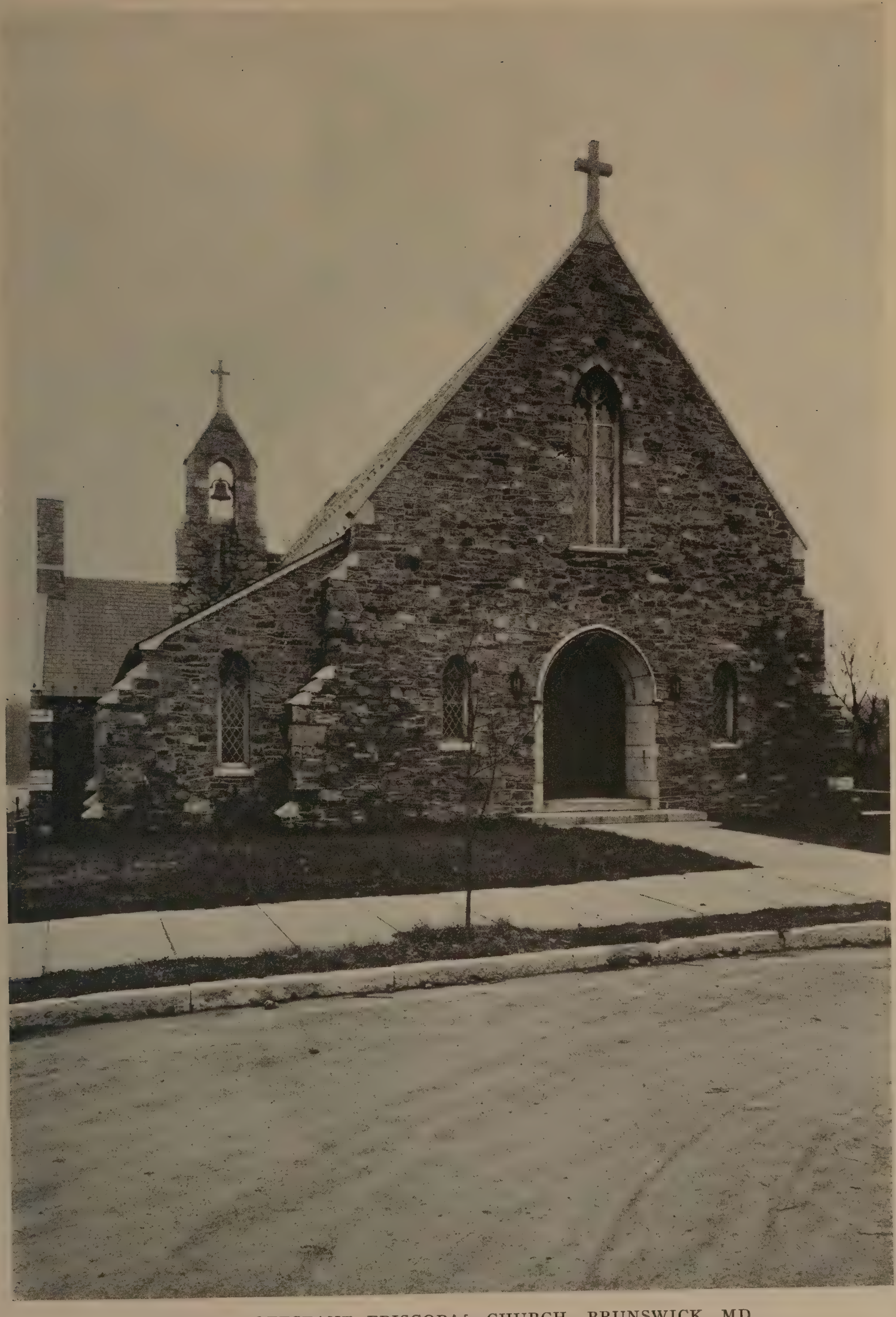


GRACE PROTESTANT EPISCOPAL CHURCH, BRUNSWICK, MD.
Frank R. Watson, Architect; George E. Edkins and William Heyl Thompson, Associates



Basement Floor Plan
GRACE PROTESTANT EPISCOPAL CHURCH, BRUNSWICK, MD.
Frank R. Watson, Architect; George E. Edkins and
Wm. Heyl Thompson, Associates



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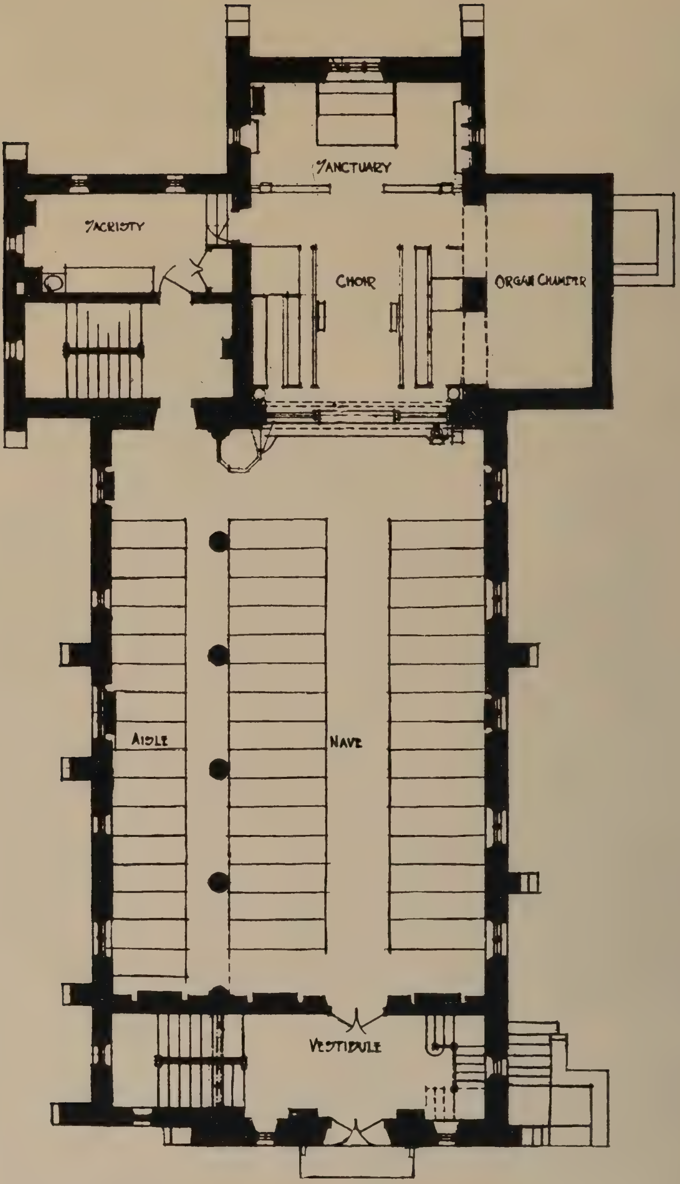

First Floor Plan
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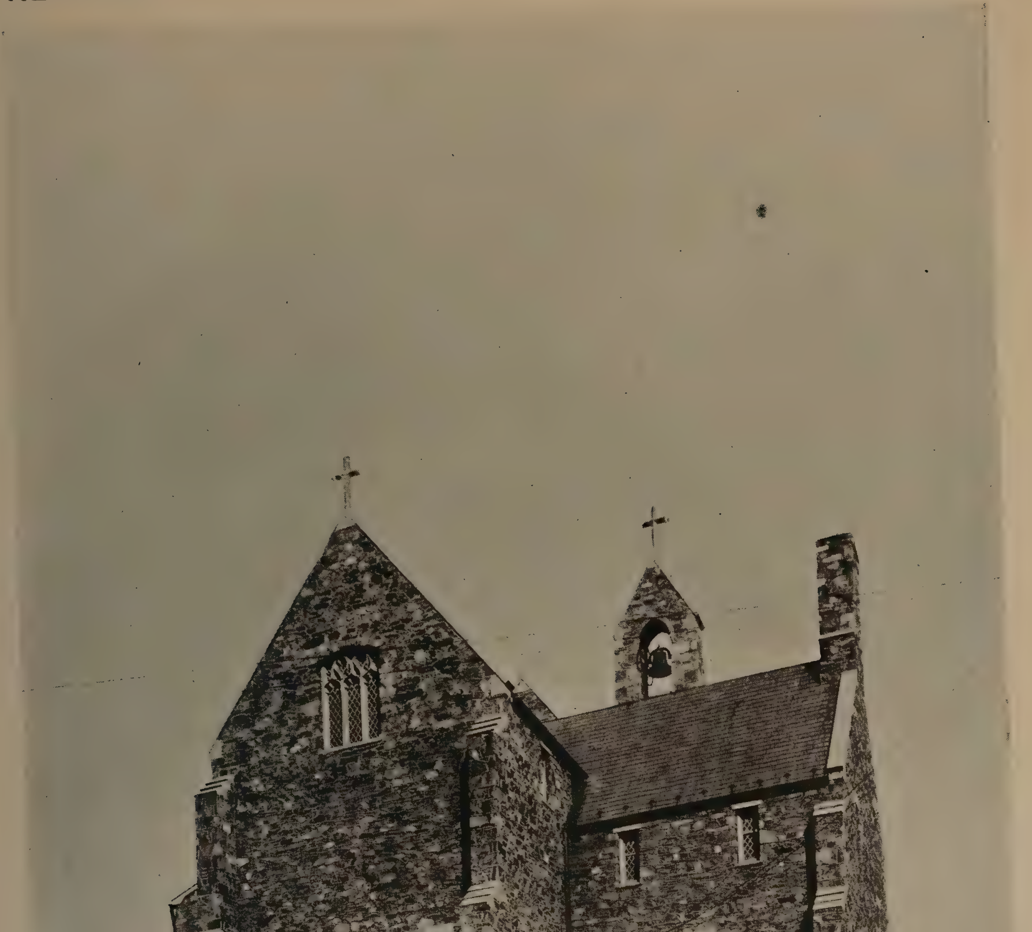
Wm. Heyl Thompson, Associates



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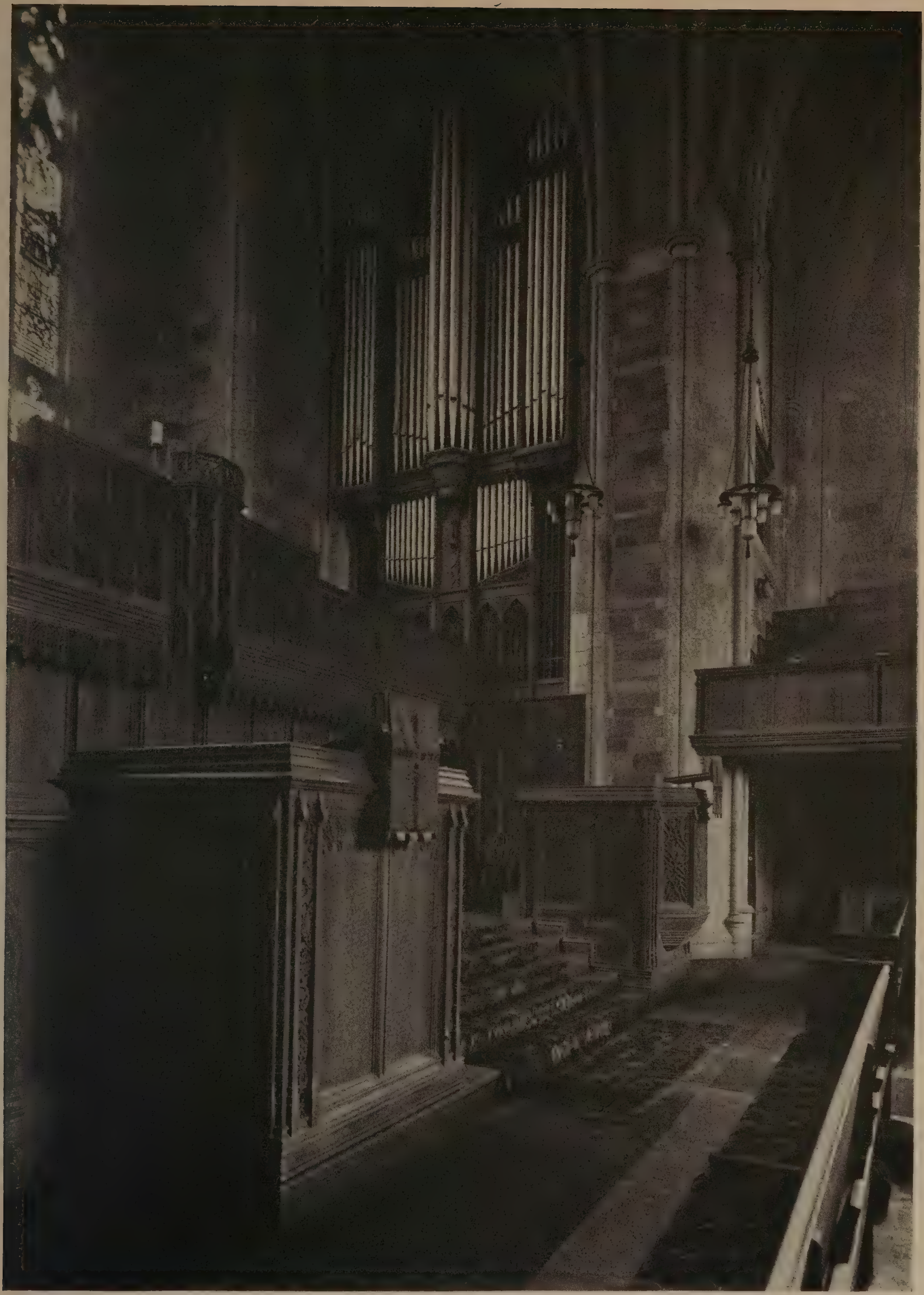


Photo. Amemiya

Detail of Interior
CONGREGATIONAL CHURCH, MONTCLAIR, N. J.
Bertram Grosvenor Goodhue Associates, Architects

EUROPEAN STORE FRONTS *and* WINDOW DRESSING

By Clinton H. Blake, Jr.

When I went to England last summer, it was with the very distinct preliminary impression that the English shops would be smaller than those of the United States and that their window displays would be simpler and limited to choicer and probably more artistically displayed goods. This impression was right in part and wrong in part.

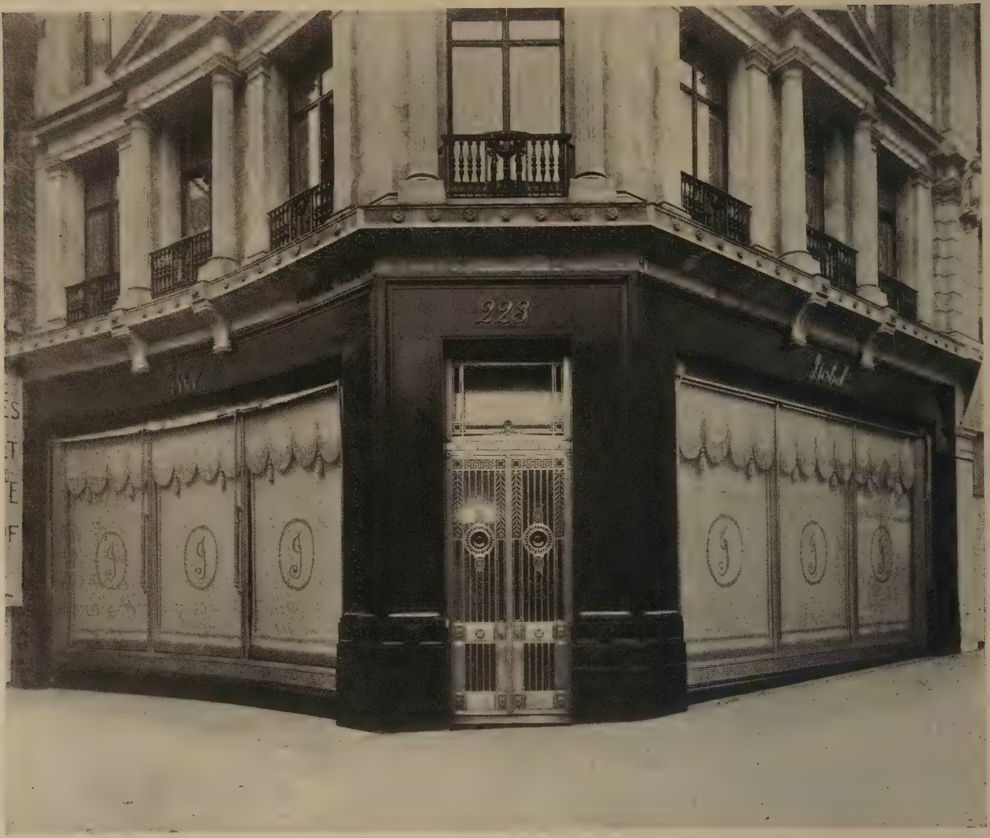
The English shop is ordinarily much smaller than the corresponding shop in this country. This is especially noticeable in any comparison of the shops of the larger cities, such as a comparision between those of London and of New York. Where the artistically designed and handsomely carried out store-front is the rule on the better shopping streets of New York and of our larger American cities, it is fair, I think, to say that it is the exception in London and in the other cities of England. Prior to the last few years the English merchant has apparently given little, if any, attention to the architectural treatment and effect of the building which he occupies. He has been content to occupy it in the same condition as it was when his fathers and forefathers occupied it and carried on there the same business which he now conducts. Whether this be due to the general conservatism of the British or to a lack of keener competition than that with which our own merchants have been faced, or to an innate indifference to outward appearances so long as the goods dealt in are sound, it is somewhat difficult to say. Probably it is the result of all of these causes.

Recently there has been somewhat of a change and there has been manifest a decided tendency in England to do over many existing and unattractive store-fronts, and to give more study and consideration to the outward effect of the buildings in the case where new structures are contemplated.

With very few exceptions, one will search the English and foreign cities in vain for any of the luxuriously planned, executed and equipped shops such as one finds along Fifth Avenue and the better shopping streets of many large American cities. These palatial shop-fronts—for such they truly are—appear to be a development peculiarly and exclusively American. Certainly there is none which can be compared with them in the capitals of Europe.

The English shops almost invariably are far smaller than the corresponding shops in this country. This fact in itself does not give to the architect and builder the same scope for exterior development as is afforded by the larger shops of America. With a shop frontage of twenty feet or perhaps fifteen feet, every available inch of window space and light is important. In the matter of general treatment and details, the architect can do much with such a shop. So far as the broader opportunity to work out on a worthwhile scale some special architectural scheme and treatment is concerned, the architect is necessarily limited far more than if he were dealing with a building of generous frontage.

The same considerations are responsible for the comparative dearth in England of shops of any size designed as units and forming a part of one integral architectural conception. The English

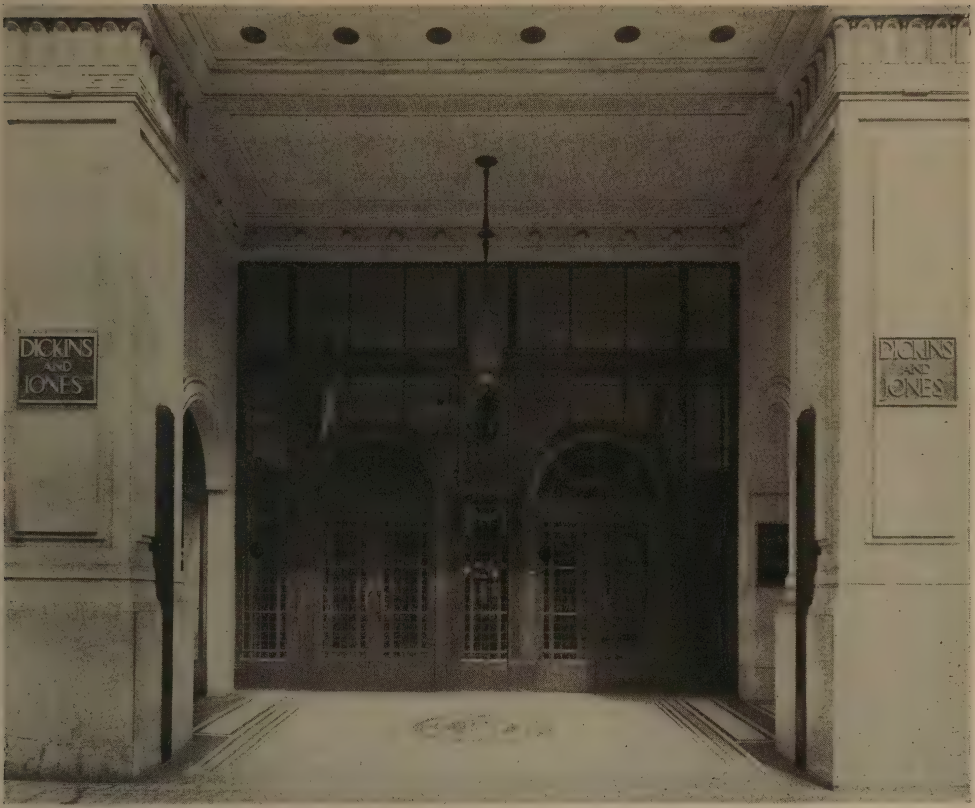


SHOPFRONT OF MADAME ISOBEL IN REGENT STREET, LONDON
Carried out in black granite with white metal sashes

architect is very much more likely to be called upon to do over the first floor of a given shop than to design some new building of reasonable size to house the merchant's entire establishment. The result is that, while many of the fronts are excellent in themselves, so far as the portion of the premises used for the business is concerned, there is lacking a unity of design between the shopfront proper and the balance of the exterior of the building.

The problem of the English architect is in this respect a more difficult one than that which confronts the American architect. The English designer who, while limited to doing over but a portion of the front of a building, has yet contrived to do so in such a way as to give the desired effect to the shop and to harmonize it with the ancient structure of which it is quite likely a part, is correspondingly deserving of credit for his accomplishment. The American architect, who is called upon to design one of our great department stores, for example, is able to carry into effect his design for the entire structure, without being called upon to adapt his ideas to an existing structure which may be totally unfitted to the purpose and effect which he has in mind. The English architect must either meet a problem in reconstruction or, with rare exceptions, confine himself at least to the design of a shop of very modest size.

There are, nevertheless, certain distinct advantages to the smaller shops. There is a feeling of coziness, of friendliness and of general welcome about them, which is quite absent in the cases

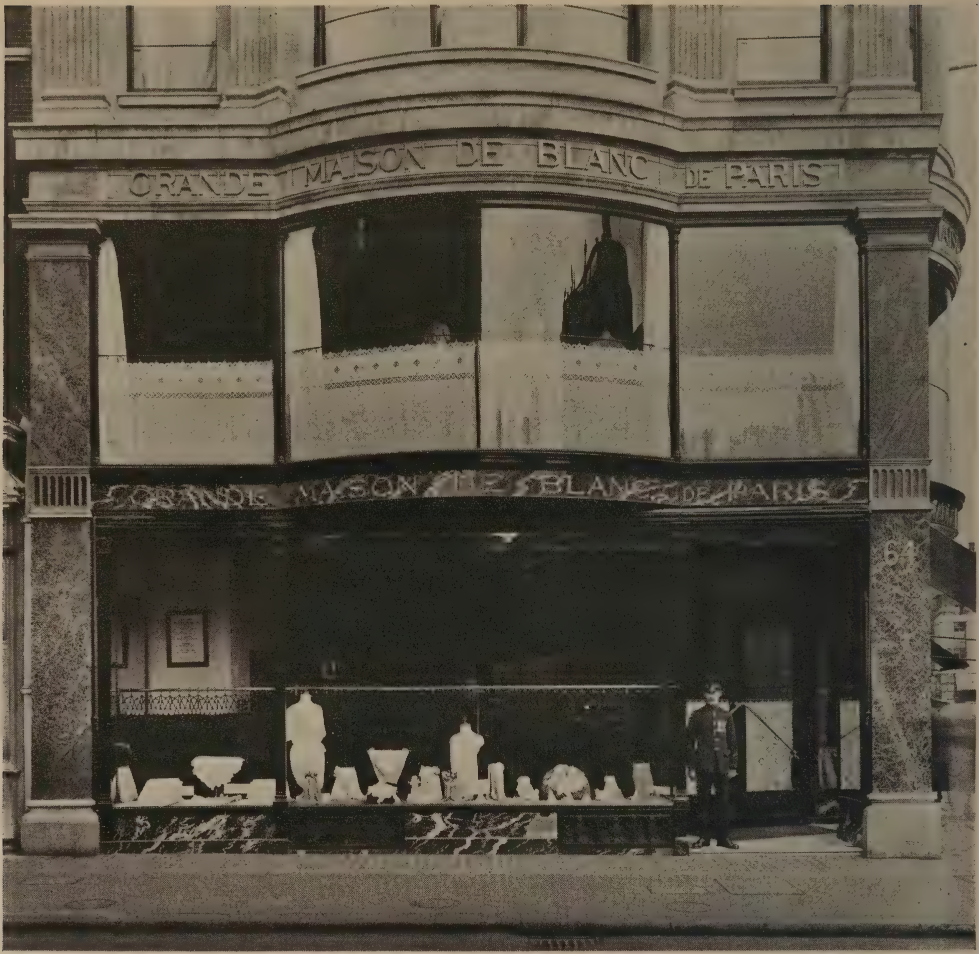


MAIN ENTRANCE TO MESSRS. DICKINS & JONES' ESTABLISHMENT
Carried out in mahogany; surroundings are of bronze metal drawn on hard wood cores

of the more ambitious and elaborate shops with which we are here familiar. No matter whether the shop be one of the highest class, with an expensive exterior of marble and architectural embellishment, or a simple and much more humble shop, it will in England be found usually to have a somewhat intangible but real appeal—an invitation to the passerby to "drop in." This is especially true of many of the simpler shops, such as those given over to antiques, books, flowers and silverware, and the smaller shops dealing with general merchandise, wearing apparel and the like.

There are two characteristics of the English store-fronts which will strike the observer especially. One is the frequent use of the small-pane sash in doors and windows; the other, the frequent use of mahogany or of some other wood exterior trim or finish, where in this country marble, granite or limestone would be employed. From the point of view of durability, the wooden trim can not be, of course, as satisfactory. From the artistic point of view, it is often very effective and gives a result at once rich and simple. The small-paned windows and doors are especially attractive and are well suited to the characteristically English type shops in which they are used.

There is something about the small shop front, with its many shining panes of glass and its quiet but warm-toned trim and door panelling, which leads one to believe—quite rightly too—that one will find a welcome within, and an opportunity to shop peacefully and with satisfaction. Many of these shops are characterized by rather attractive doorways leading to the floors above and distinct

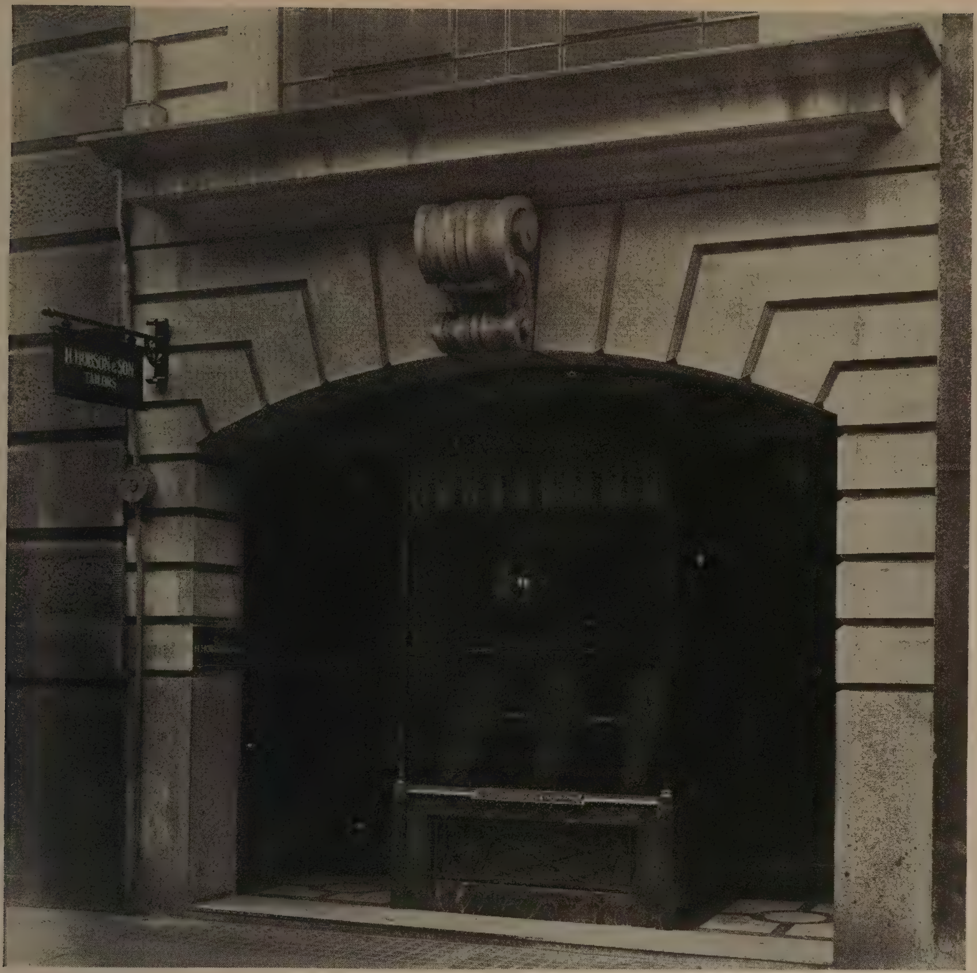

GRANDE MAISON DE BLANC DE PARIS
GRANDE MAISON DE BLANC DE PARIS
64

THE BOND STREET, LONDON, BRANCH OF THE PARIS HOUSE GRANDE MAISON DE BLANC
The frontage of this high-class lingerie and underwear shop is carried out in marble

from the doorways to the shops themselves. The impression created is that of permanency and of a homelike atmosphere. The store becomes at once an integral part of the whole building. You feel confident that the proprietor must live upstairs and that, in entering the shop, you are in a sense entering his home, as indeed you often are. The invariable brass door knocker on the house entrance, the blending of residence and of shop and the peaceful dignity of the whole establishment is very pleasing. The psychological effect from a trade point of view is no less admirable.

The partiality abroad for the smaller shop is reflected in the frequency with which the arcade plan is adopted. In England, and in France and Italy especially, the arcade lined with the smaller shops is a common sight. It has an appeal and character which are all its own, and there is undeniably much of fascination about it. It has also the added advantage of giving to the very small shopkeeper an opportunity to display his wares in proper surroundings, without a disproportionate overhead charge for the rental or up-keep of his premises. The Burlington Arcade is, of course, well known to every visitor to London.

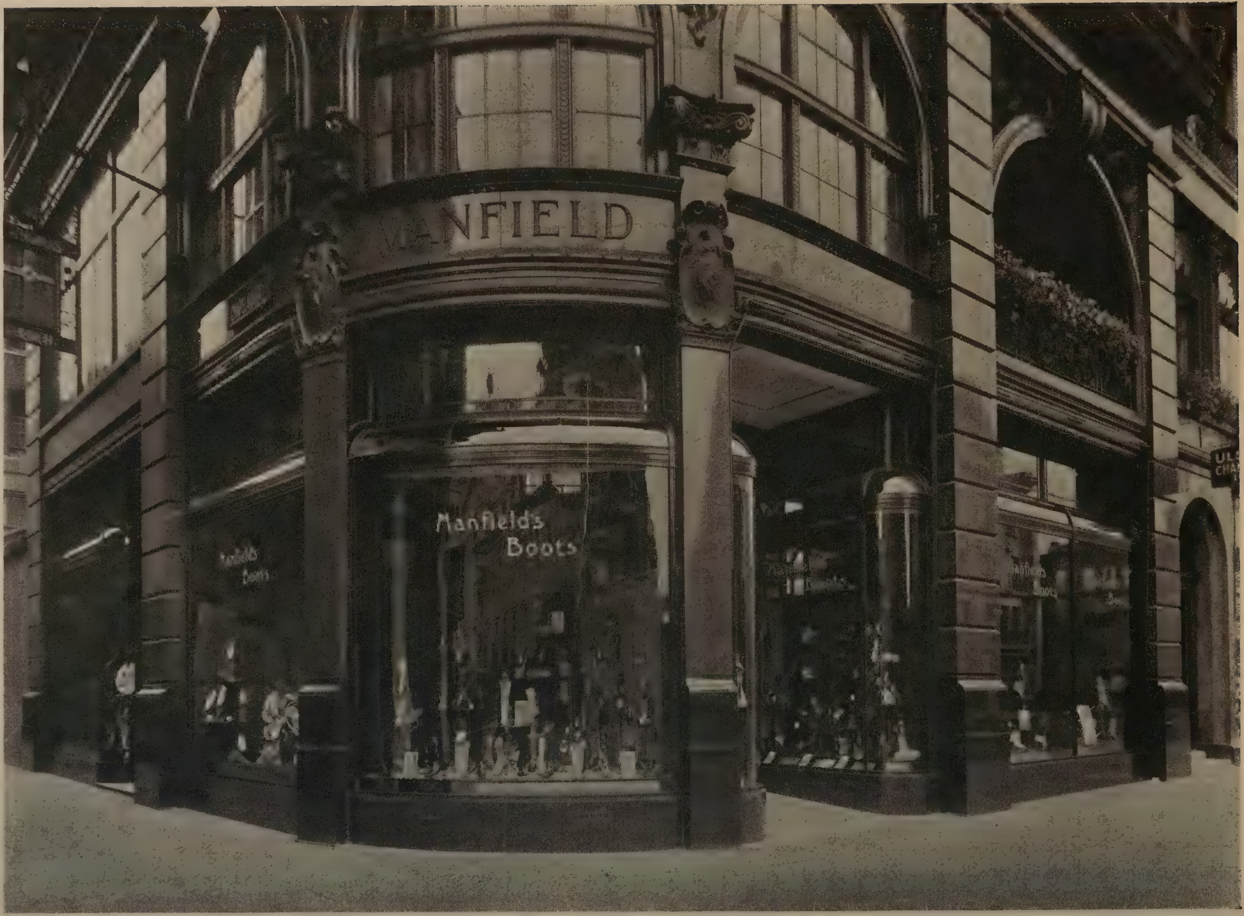
The arcades in Paris, extending in



AN EXAMPLE OF A MODERN DOUBLE ENTRANCE FRONT, GRACECHURCH STREET, LONDON
Shop front carried out in bronze metal and granite

many cases for a number of blocks, are especially interesting. In many of them, no attempt at unity of treatment is made. The shops appear exactly as they may have chanced to develop and, as a rule, their separate fronts, as distinguished from the general effect of the arcade itself, are uninteresting and undistinctive. In France and Italy, also, one will find, of course, those arcaded treatments where the shops all open upon a covered sidewalk, but, instead of lining both sides of the passageway, occupy but one, while the pavement or highway runs along the other. In this connection, the shops upon or nearby the Rue de Rivoli come at once to mind, not to mention the continuous line of small but enchanting shops which extend beneath the arcades surrounding on three sides that splendid Piazza of San Marco.

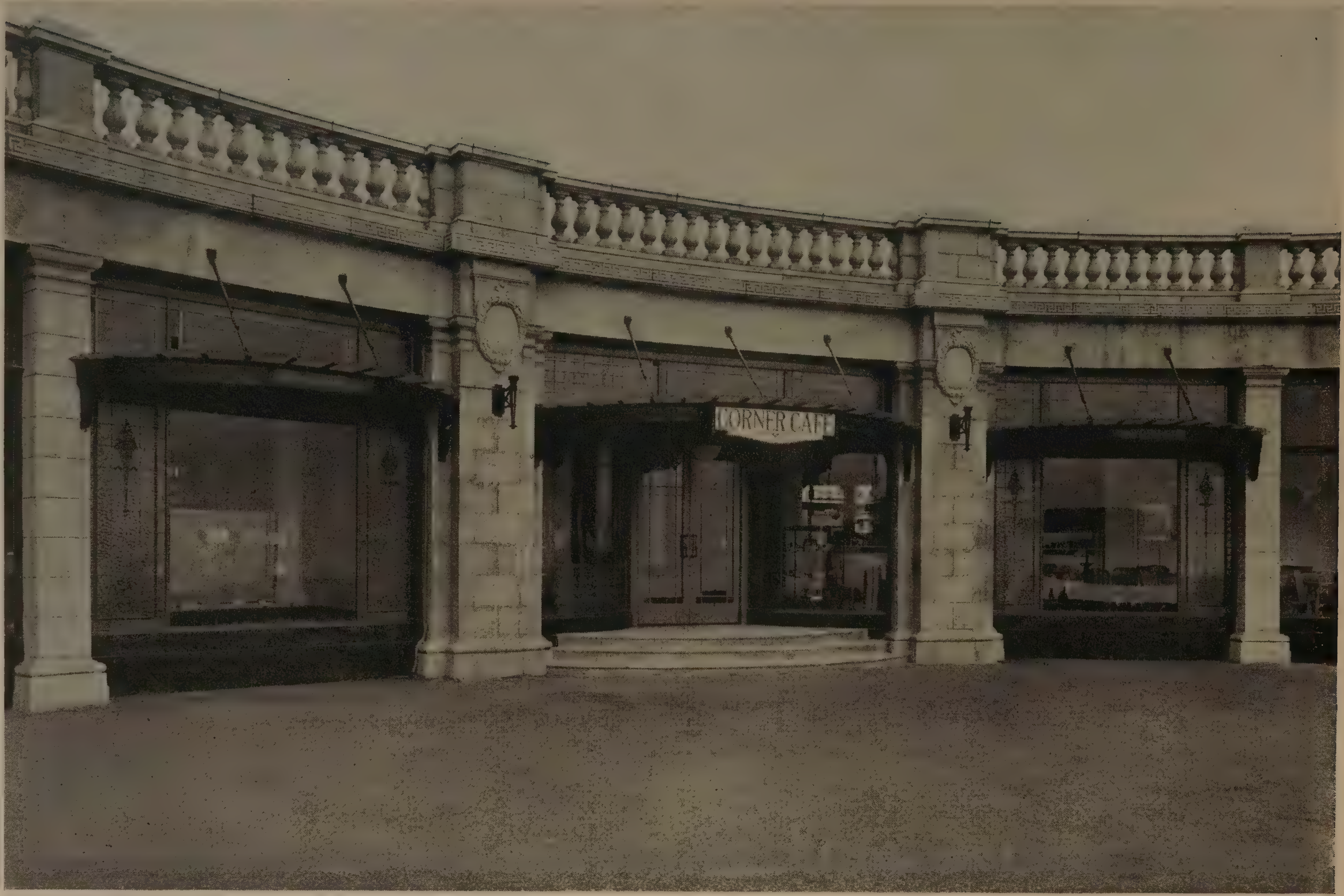
The shops abroad, so far as luxury or unity and architectural beauty of design are concerned, must on the whole give way to the work of the American designers. So far as general attractiveness to the purchaser is concerned, and so far as they are to be judged by their general appeal and friendly atmosphere, they need not, however, be embarrassed



The Architectural Record *October*, 1926

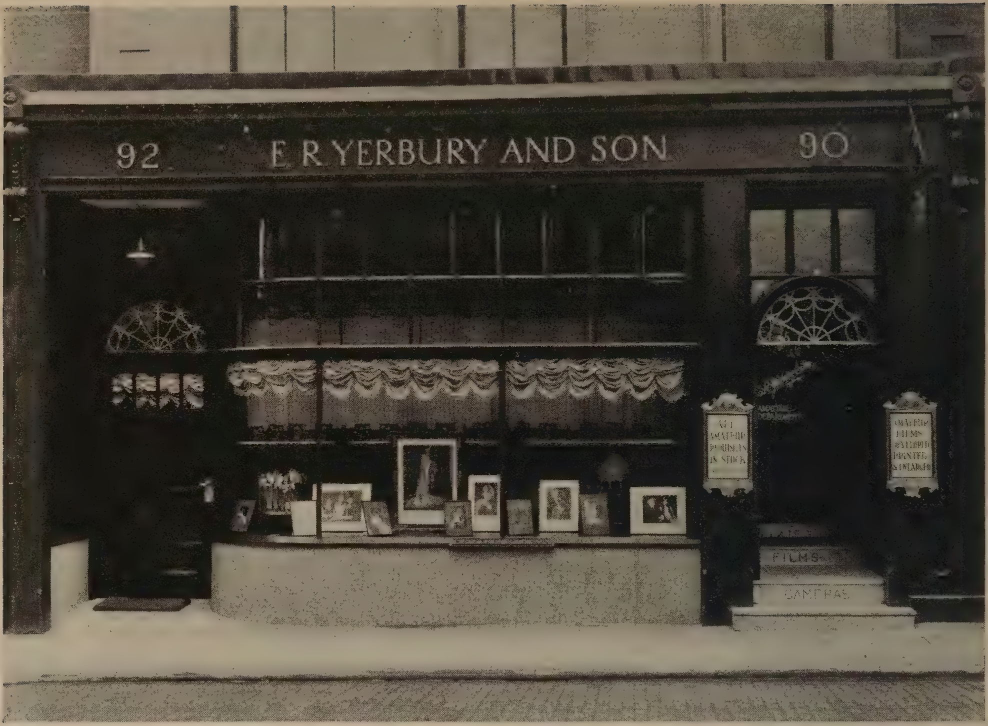
CORNER PREMISES OF MESSRS. MANFIELD'S, REGENT STREET, LONDON

The front is of bronze metal with emerald granite risers

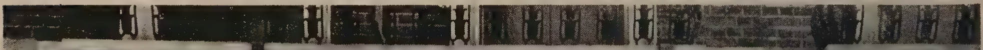


A CAFE ON THE SEA FRONT PROMENADE OF SCARBOROUGH, YORKSHIRE

Bronze metal has been mainly used on account of its weathering qualities; also special shaped glass top canopies in cast iron at transome height, above which are copper light glazed fanlights to allow the maximum light to penetrate the premises

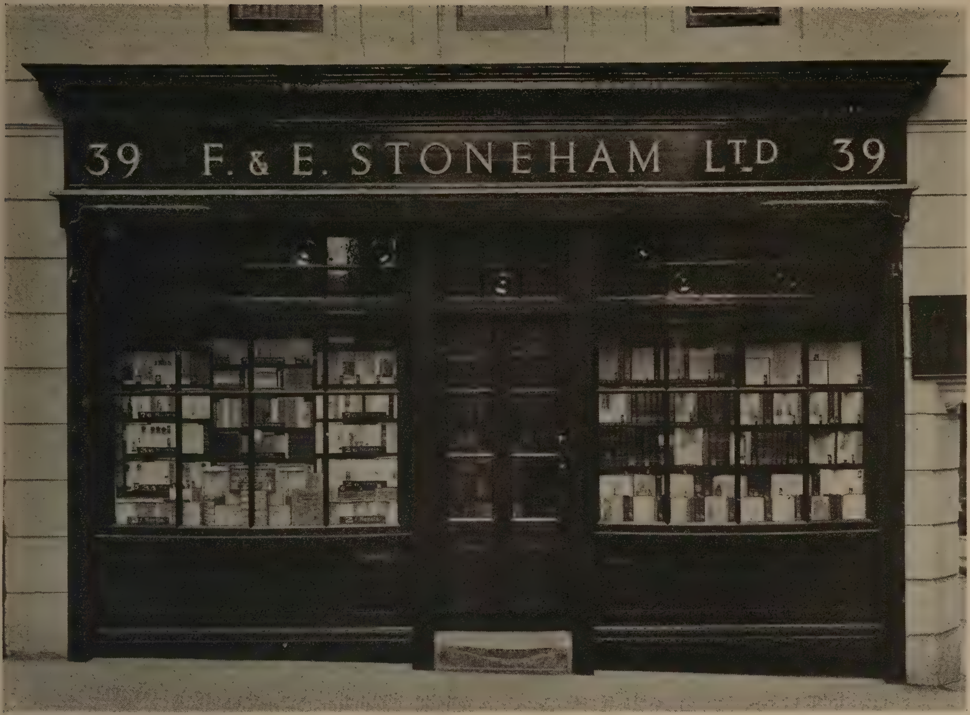


A shop front carried out in mahogany with tiled riser; bevelled glass fanlight over each door with gilt bronze metal grilles

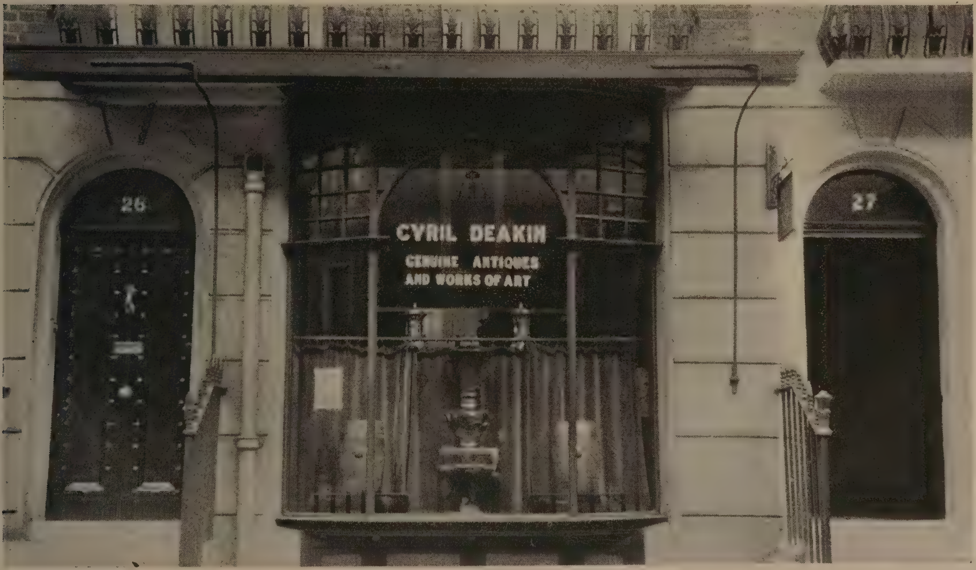


A small-pane window with mahogany trim

EXAMPLES OF THE ATTRACTIVE ENGLISH SMALL SHOP FRONT

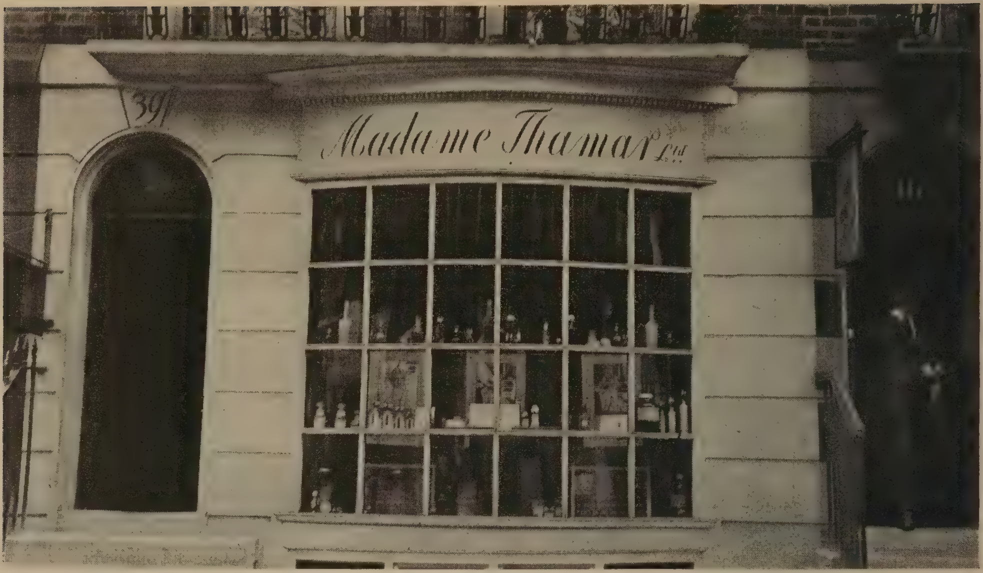


A shop front of Old English style carried out in dark fumed oak



A simple but arresting window in Oriental yellows and blues

EXAMPLES OF THE ATTRACTIVE ENGLISH SMALL SHOP FRONT



A SMALL-PANED FRONT WITH RESIDENCE QUARTERS ABOVE
The display of toilet accessories was particularly attractive

by any comparison between them and the finest of the great merchandising establishments which grace the upper reaches of Fifth Avenue.

BOSTON DRY POINTS

By
Hubert G. Ripley

VIII. The Old City Hall

The minutes of the first meeting of the Boston Society of Architects in November, 1867, are devoted to the question, "How may technical books in the Public Library be made available to the members?" Obviously architects would not be able to spend the time necessary for study and reference in the Library itself, so a plan was evolved by which these books could be borrowed for a limited period, the Society guaranteeing the Library against loss. This plan has been in constant operation for nearly sixty years.

At that time, the old public library building in Boylston Street, opposite the Common, had been completed only a few years, through the generosity and public Spirit of such men as Bates, Ticknor, Everett, Agassiz, Felton, Holmes, Pierce and Rogers. Previous to 1854, the Library occupied a room in the Old City Hall in accordance with the tradition extending back to the 17th century, since which time there had always been a Library in the Town House.

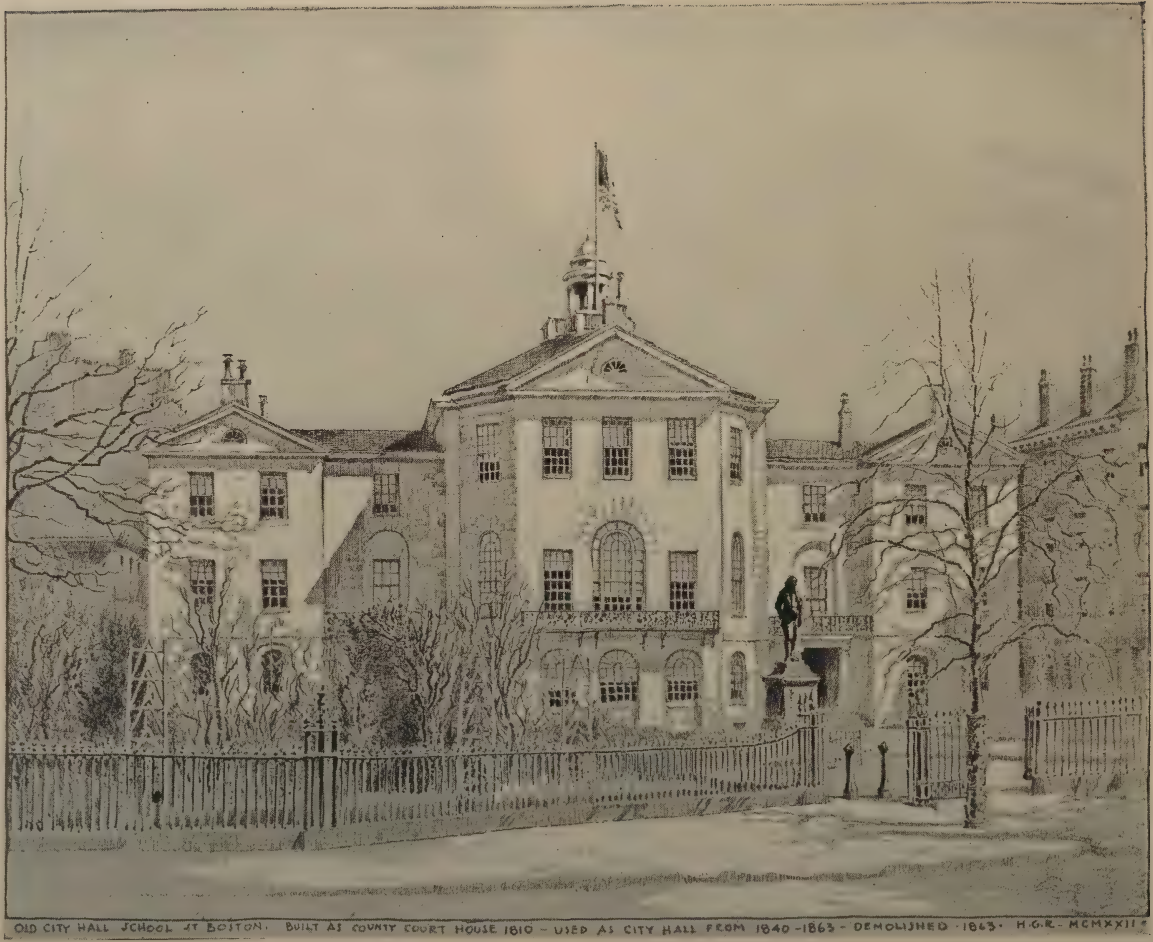
As late as 1840, Mr. Howe tells us, "the idea of free books was yet to be born." When the Military awaited the arrival of Lafayette at the city line, free punch was provided. . . . "Had anyone proposed to provide free books at the expense of the taxpayers," wrote the second Mayor Quincy regarding this circumstance, "there would have been much indignation. We should have been aghast at the impudence of such a proposal; but a few glasses of punch was another matter!" This was in 1824. Nowadays in place of punch, we provide free books for the military. These old accounts of celebrations—banquets, the laying of cornerstones, and the raising of timber frames, make most distressing reading.

The old County Court House, better remembered as the Old City Hall, was built in 1810. It was designed by Charles Bulfinch and possessed the quiet dignity and charm of all his buildings. In 1840, the Court House in Court Street was built, a Greek Doric Temple of Justice of great beauty, with a splendid portico in granite. The earlier building then became the City Hall and was used as such until in 1863 it was razed to make way for the present ungainly bulbosity.

It is a great pity that the city lacked the vision to retain the old structure as a monument. It was worthy to rank with the best work of its time. Setting well back from School Street, with a pleasant lawn embellished with shrubbery and separated from the street by an ornamental fence of cast iron, the old building was charmingly enframed in a well-mannered setting.

On its central axis stood the statue of Franklin who, contrary to general belief, was born in Boston, loved the town and on his decease generously endowed it. The village of Franklin, Mass., only five hours and seven minutes from New York, was named after Bonhume Richard and contains a very lovely bandstand

From a Drawing
by
Hubert G. Ripley


OLD CITY HALL SCHOOL AT BOSTON. BUILT AS COUNTY COURT HOUSE 1810 – USED AS CITY HALL FROM 1840-1863 – DEMOLISHED 1863. H.G.R. MCMXXII

on the Village Green, designed by Dicky Fisher. There is a story that when the town was young, the citizens wrote Franklin soliciting the gift of a bell for their proposed meeting house. Franklin replied that they had better save their money and build no steeple. Instead he sent them books as he said "that sence was preferable to sound."* This doctrine possesses an ethical significance corresponding to the homiletical virtues of the great philosopher.

In the early nineties, Boston awakened to the fact that the design of its civic buildings, particularly its school buildings, was a disgrace to the city boasting the proud title of the "Modern Athens." Even its adytum as a "literary centre" was disputed by Indianapolis and Emporia. The designing of public buildings had for years been in the hands of incompetent architects appointed for political reasons. The sanctuary of the goddess was profaned by the spoor of politicians. To Edmund M. Wheelright was entrusted the Augean task of reform. A city architect's office was established under the leads of the mansard roof of the present city hall.

The experiment was successful beyond all expectations in spite of the many handicaps and obstacles that met the new appointee at every turn. It is needless to say that this result could not have been achieved without the coöperation of the profession in Boston, particularly the draughtsmen and bright young students fresh from Paris and the Chicago World Fair. The City Hall office developed such men as Charles Maginnis, Harry Pratt, Eddie Crane, Arthur Rice, Robert C. Spencer, Wallis Howe, Eddie Wait, Matthew Sullivan and many others. Wheelwright kept his private office going and managed the two organizations with great élan. The two offices, while quite distinct, were in a sense interwoven, men from one working in the other as need arose, when some job was particularly pressing.

The first annual reports of the City Architect's office were highly prized documents, illustrated as they were with Charlie Maginnis's incomparable pen drawings. Later reports contained photographs of executed work so vastly superior to anything that had preceded it for generations that the whole city rang with acclaim. There was an *esprit* in the office that made it an attractive place for draughtsmen. It was well worth being there if only to hear Matthew Sullivan bawl out contractors and material men. Matthew always had a pocket full of dyspeptic looking cigars, pale yellow wrappers with white spots, that he was too kind-hearted to hurt the feelings of contractors by refusing. He never smoked these himself, preferring Coronas and Larranagas, but was most generous with them to his friends. Only a hardy Scot like George Will could manage them successfully.

One of the most lovable members of the office was Soderholtz, who now makes such exquisite garden pottery in West Gouldsboro, Maine. At that time Sody held down a stool as a draughtsman, but as his genius was of the order not bound by conventionalities, and moreover being a great lover of nature, he used to spend hours gazing longingly out of the windows at the deep blue waters of the harbor, or listening to the sparrows and starlings twittering in the stately elms of Kings Chapel burying ground.

On a sparkling Thursday afternoon, for example, Sody would complain of feeling poorly and go home early. About the following Tuesday morning he would show up at the office again with a wonderful coat of sunburn and a strong disinclination for work. Anything in the mechanical, chemical, physiological, scientific, electrical or anthropological line Sody knew all about and could demonstrate. He was a photographer in the same class with Julian Buckley and Kenneth Clark, as shown by his three monographs of Colonial Architecture published over twenty-five years ago. Sody's Spanish and Italian photographs brought back from a winter spent in Europe about 1905 are peerless examples in chiaroscuro. He owned, or rather hired, the

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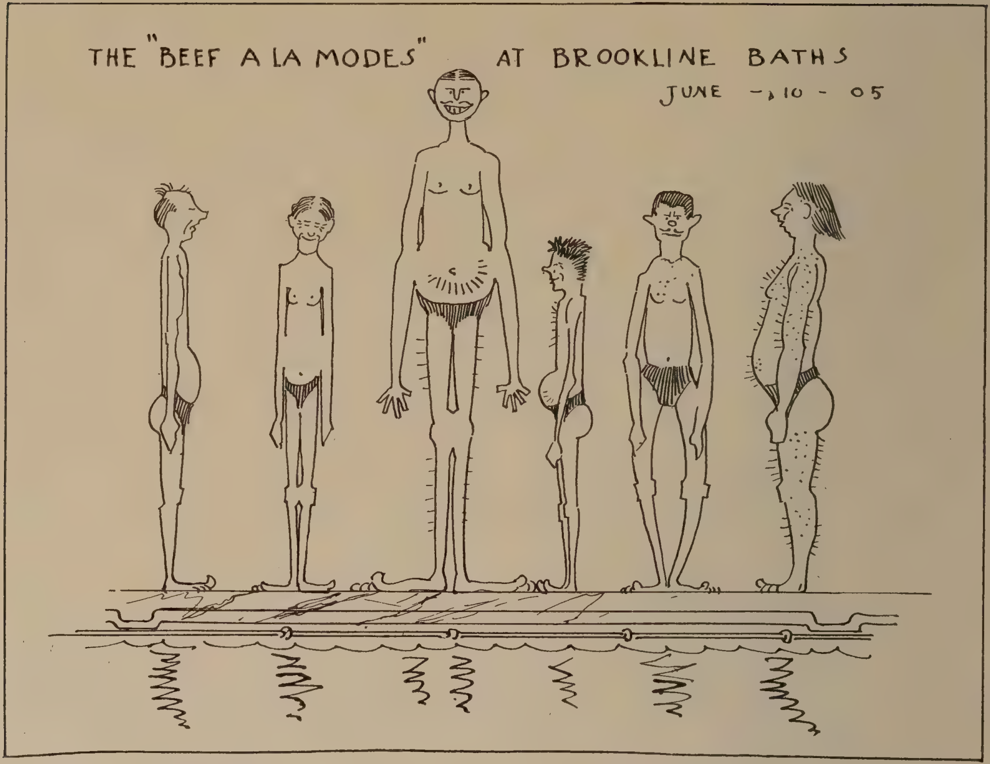
* "Boston, the Place and the People."


THE "BEEF A LA MODES" AT BROOKLINE BATHS
JUNE - 10 - 05

The "Beef a la Mode Club" was composed of members of Peabody & Stearns' office, and corresponded with the "Three Hours for Lunch Clubs" of the present day. Saturday afternoons were usually devoted to some clean, healthy sport as is here shown. Drawing by Willie Johnson on one of the Club Outings. Reading from left to right: Willie Johnson, E. H. Prichard, E. J. Weber (now a distinguished Pittsburgh architect), Eddie Maher, Pete White, and Ye Ed.

first phonograph (almost) in Boston, which he demonstrated at the first Centurial Dinner of the P. D. Club.

It would have added wonderfully to the occasion, had not Tim Walsh plugged the horn so tightly with an accurately thrown orange from the other end of the table, that we heard but the opening bars of "Go to sleep, my little piccaninny." It seemed the natural thing for Tim to do, when the machine, secretly introduced into the private dining room at Mieussets during the hors-d'oeuvres, suddenly burst into song. We all followed Tim's example, and Sody and the phonograph became the target for a deluge of bananas, apples, figs, grapes, and all the condiments on the table.

Mons. Mieusset, bon père de famille, was a bit apprehensive of the P. D.'s, an organization of Poor Draughtsmen who used to meet regularly for purposes of study and *savoir vivre* and liked to dine on occasion at his establishment. After the first dinner, we always had the basement room, where the floor was concrete and the walls masonry. It was also more sound-proof and there were iron bars outside the high windows.

When Louis La Beaume wanted to stand up on the table among the *filets mignons* it didn't matter much if the whole thing did come down with a crash. Mieusset was very broadminded, not at all like the proprietors of the "Sole Sforza" in Avery Street who insisted that all leave immediately when George Perkins playfully tried a forward pass with his half of a *poulet roti St. James.* These little amenities were quite a matter of course to draughtsmen exhilarated with the love of art, tending to make the gatherings less formal and stiff.

The Poor Draughtsman's Club was organized on December 24, 1893, in the little back room above the quarters of the Boston Architectural Club in Tremont Place. Sody used this room and its adjoining closet for his photograph studio, finding that occupation more congenial than sitting on a stool at a draughting table in the City Hall. There were never more than fifteen P. D.'s and the club activities lasted only a little over two years.

A lifetime of incident was crowded into those two years, however, and its passing was gradual and peaceful, some members going to other cities, like Eddie Crane, Harry Pratt, Donald Hart and Dan Kearns, some entering occupations other than architectural and some finding that the life of a Benedict with its attendant problems conflicted with the strenuous demands of membership.

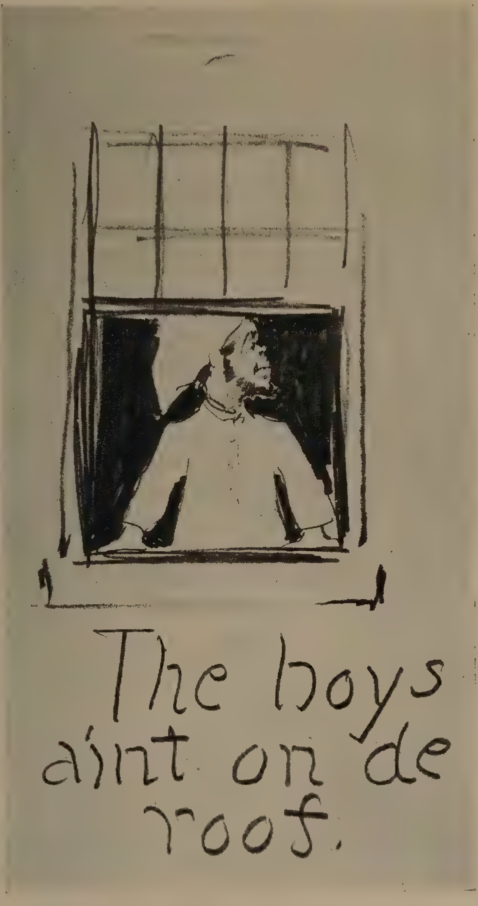
The prime objects of the club were social relaxation and the injection of the graces of humor into the practice of architecture. The ancient Greeks looked on life as a joyful thing; they regarded their gods not only as superior beings but as personal friends, possessing the same human attributes. They worshipped them erect and proudly, laughed at and with them. Homeric laughter played a large part in the doings of the P. D's. Their inspiration was Greece, Rome and the Renaissance, which has much in common with the earlier cult. Each member of the club was given the name of some great artist of the past, and the list read chronologically — Hermodorus,* Callimachus, Ictinus, Vitruvius, San Gallo, Michelangelo, Bramante, Vignola, Piranesi, Brian Boru, Inigo Jones, Christopher Wren, Bulfinch, Viollet le Duc, and Garnier Frères.

Sody's large room was a delightful old garret where, in the words of Harry Pratt's impeccable Alcaic verse:

Freed from the fret of Routine's slavish toil,
They meet once more in Freedom's jollity.
No thought of Care comes to them now to spoil
The merry jest, the gay Frivolity.

In addition to entering the first two or three competitions of the newly formed Beaux Arts Society of New York, taking an active part in the affairs of the Architectural Club and generally promoting a spirit of conviviality and comradeship among the various offices of the city, the P. D.'s on one memorable occasion actually dabbled in world politics.

It was at the time of Cleveland's Venezuelan message and we didn't know for a while but that the flower of our youth


The boys ain't on de roof.

Idealized sketch of Manning K. Rand, the dentist who occupied the second floor of No. 5 Tremont Place. He took great interest in the club activities above him.

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* Hermodorus was from birth one in a thousand, for whereas the first spoken word of 499 out of every 1,000 babes is "Papa," and of 500 in every 1,000 is "Mama," the first spoken word of Hermodorus was "Auntie." (From the P. D. archives.)

might have to go to South America in the Cause of Freedom. The P. D. Club met the issue in no uncertain tones, and issued the following ringing proclamation:

AT-TEN-N-N-N-SHUN ! ! !

Headquarters Commanding General, day after the message.

SUBJECT: MARCHING ORDERS

I. The P. D. forces will be concentrated one hour after pay day and formed on a hollow square (any square that is hollow will do) and from thence march by way of State Street to the steamer "Half Seas Over," and by her be convoyed to Venezuela, where their headquarters will be in Weinweibgesangstrasse, Caracas, their flank resting in British Guiana.

II. The several commanders will see that their men on their way to the boat, are not the victims of supine submission to circumlocutionary circumstances, in other words, "Beware of the Jag!"

III. To this end, the men will be blindfolded and have their nostrils stopped with cotton while passing Conklin's.

IV. Information as to the size of canteens and the contents thereof, the favorite restaurants of Caracas, and the drinks served therein, and the etiquette to be observed in imbibing the same, may be obtained by applying to Adjutant General Piranesi.

V. Forty rounds of liquid ammunition will be served each man for use on the harassing march from the hollow square to the boat.

VI. Grog will be served on board by or from the commissary whenever desired, but after 11 P. M., it must be accompanied by Welsh Rarebits.

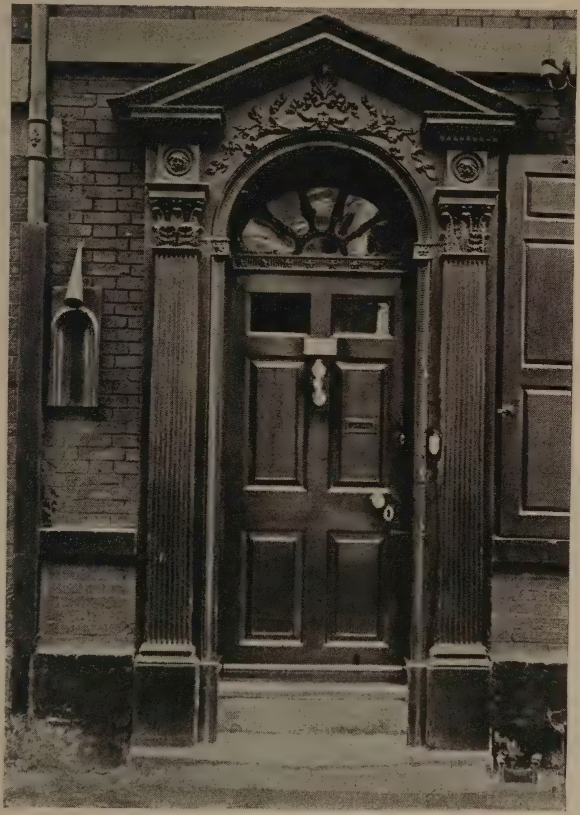
(*Signed*) Vitruvius, General
Commanding P. D. Forces.

Ye Ed.

SOME OLD DOORWAYS in YORK, ENGLAND

By J E Reid

York, the Eboracum of old, exults in an uninterrupted historical record of over 2,000 years of strenuous life, and under the Roman Conquest commencing with Julius Caesar, became the hub of the Empire and of the world. Two Roman Emperors died here—Severus, and Constantine Chlorus. Constantine the Great was proclaimed Emperor in York by the legionaries, on the death of his father, Constantius, and it was supposed that he was born here, but this has never been justified. York retained its premier place in the world until the time of William I, when London began to exceed the city in importance.

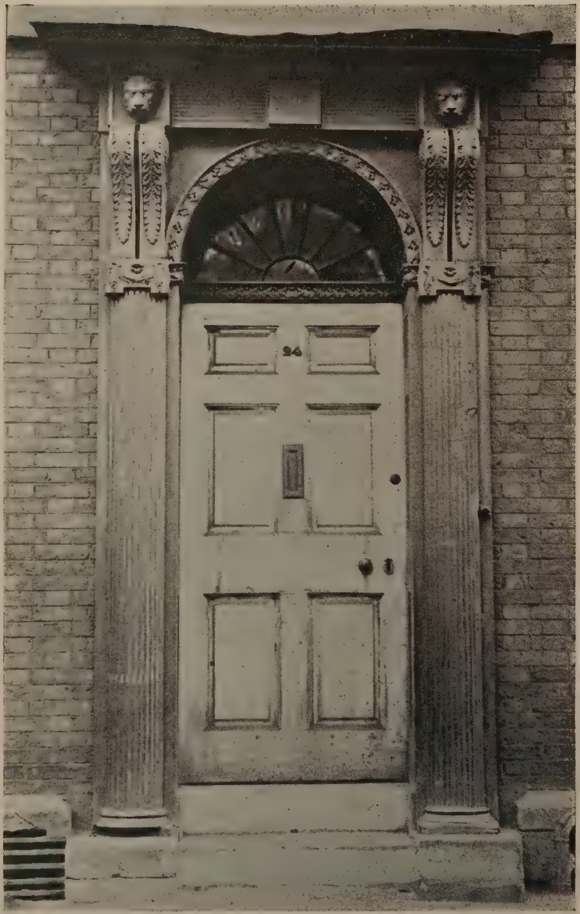


A DOOR IN LOW PETERGATE, YORK

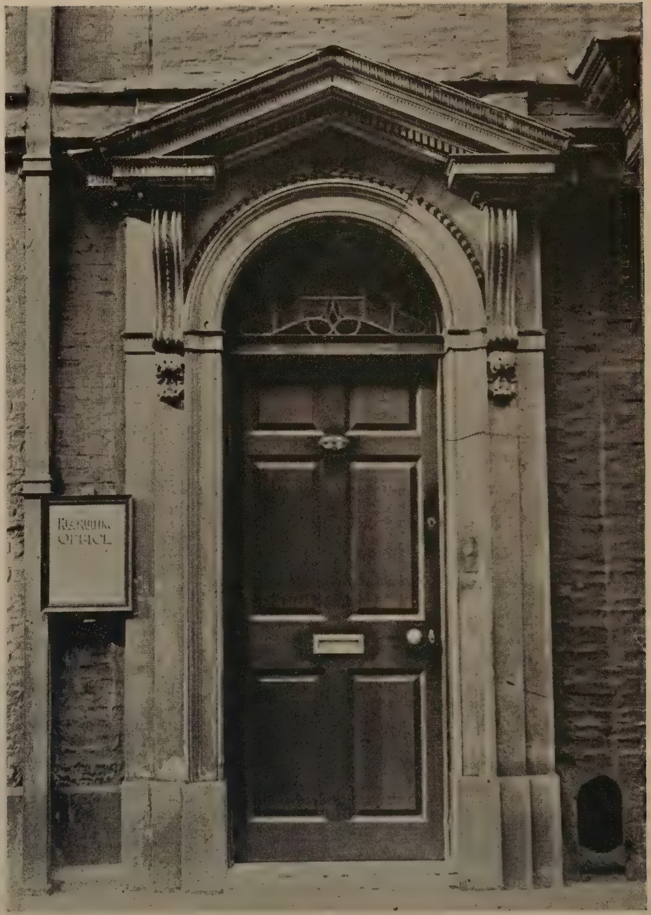
The ancient buildings and relics of York, which are landmarks in its history, are varied as they are numerous. At one time the city was dominated by a powerful tide of spiritual fervor, out of which grew the many churches that are characteristic of the place. The city at that time was divided into many parishes (ecclesiastical districts having officers of its own), and as each parish vied with one another in its churches, it resulted in the multiplictiy of places of worship of great architectural interest, which even now exhale a rich atmosphere of religious devotion, and attract the devotee, artist and architect from all parts of the world.

York still retains its mediaeval flavor, its architecture is in a good state of preservation, and it is a great attraction to tourists who throng the place in summer. The secular buildings form some of the principal streets and are occupied as dwelling houses, or used as places of business. These constitute an open and free picture gallery for the wayfarer.

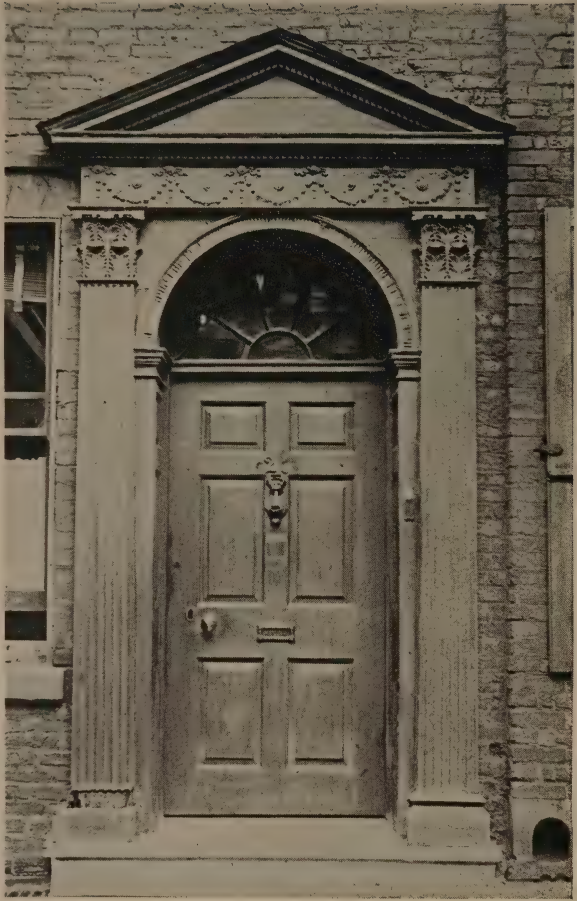
The architecture of York is representative of the different reigning monarchs,

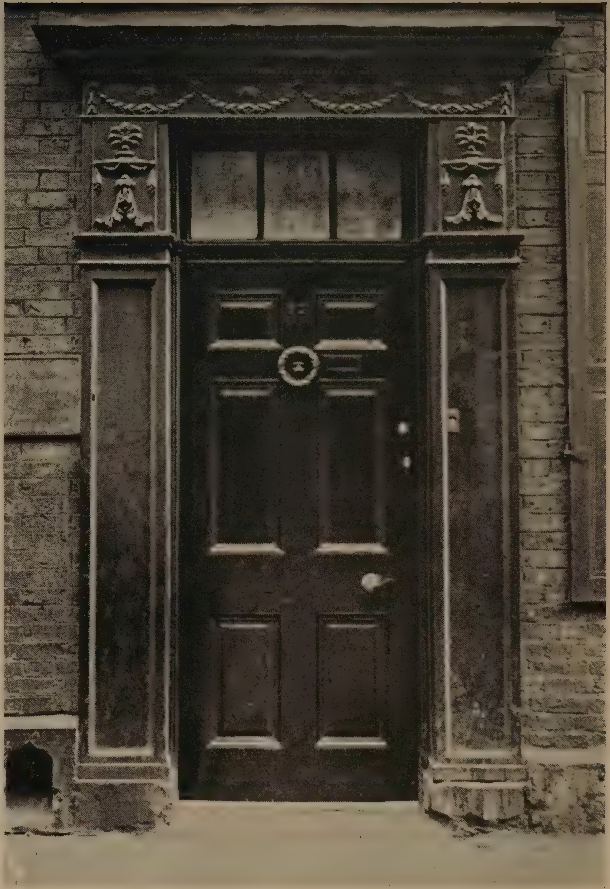


NO. 24 ST. SAVIOURGATE, YORK



NO. 29 ST. SAVIOURGATE, YORK





NO. 21 CASTLEGATE, YORK

NO. 22 ST. SAVIOURGATE, YORK

and the period of the Georges exhibits outwardly a subdued nobility, and a lavish grandeur within. The fabric is skilfully built in brick, with plain areas of walling, lofty windows and ornamental doorways, which all show good taste and indicate excellent craftsmanship, as if the owner regarded his entrance as of supreme importance. The cult of the Adams school was responsible for these fine entrances which are perfect models of the period.

The doorway in Low Petergate faces the church of St. Michael-le-Belfry, and is built in stone except for the pediment and cornice. The fluted pilasters, capitals and carving, are cleverly executed. At the left side of the doorway, there remains a wrought iron torch extinguisher which is reminiscent of the time when lamps and policemen were few and the link boy armed with a flaming torch used to precede the foot passenger at night.

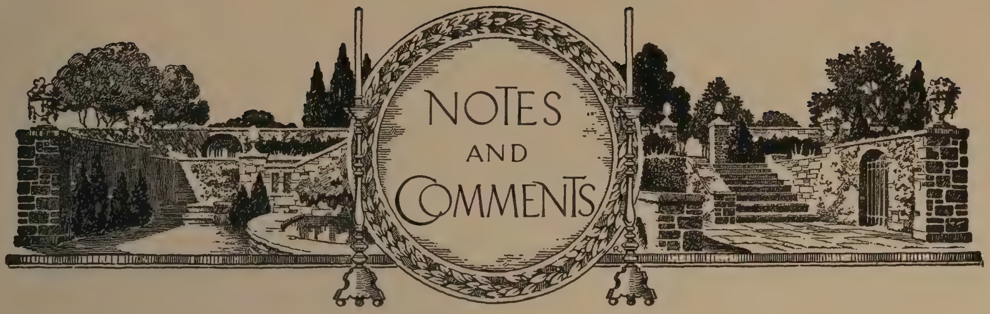
The doorway at 24 St. Saviourgate is rich in its double console, capped with lions' heads, reeded lintel and semi-elliptical pilasters with swags and drop caps.

The doorway at 29 St. Saviourgate is a chaste example of the simple and plain architrave and pilaster, with some ornamentation of the consols, pediment and cornice. The modern fanlight spoils the harmony of this doorway.

The doorway at 21 Castlegate is not in such good preservation as the others, and whilst it remains an example of good workmanship, it is slightly lacking in design.

The doorway at 22 St. Saviourgate is plain yet has points that are attractive to students of architecture.

The above doorways are only a few of the many excellent examples of the Georgian six panelled doors. The narrowness of the streets in York prevents photographs being taken of other features.



The New Wing at the Metropolitan Museum of Art

Among the Art Museums of the country and perhaps of the world, there is none whose management has more intelligently sought to satisfy and increase the popular interest in fine architecture than the Metropolitan Museum of New York. This statement has always been true, but it has been particularly true of recent years. The special building in which not long ago it installed examples of every phase of colonial interior decoration of this country was a peculiarly successful illustration of what a museum can do to restore for the imagination of a later generation the domestic life and the decorative standards of an earlier generation. The architectural profession also owes the management of the Museum a debt of gratitude for installing in the new wing which was opened in April of the present year the bedroom from the Palazzo Sagredo in Venice. The bedroom is both in design and workmanship a superb example of the rococo interior decoration of the first quarter of the eighteenth century and deserves the most careful and appreciative study. [See Page 374.]

In the same wing the management of the Museum has made a still more pretentious and elaborate attempt to revive for its patrons the surroundings in which a past generation carried on some part of its domestic life. "The period chosen," says the official catalogue, "was that in which the material necessary for a trustworthy reproduction is most abundant; viz., the earlier years of the Roman Empire. The theme selected was a peristyle surrounding a garden, such as the Romans might have built in their villas along the shore of the Bay of Naples. No one house was used as a model, but the court is composed of homogeneous elements from different sources, the colors being copied from originals in Pompeii and the neighboring towns. The total dimensions of the court are ninety-seven by one hundred and twenty-nine feet, the colonnade being twenty-six feet wide on each of its four sides, and the open garden which it encloses measuring forty-five by seventy-seven feet, with a marble basin and fountain in the center."

"Some of our original sculptures have been set up along the paths and in the beds of the garden, and the colonnade is also utilized for exhibits, shown more effectively than has hitherto been possible, so that there is no waste of exhibition space in this arrangement. Perhaps this is the place to say that in the creation of this court a threefold intention has been kept in mind: first, to show Greek and Roman work of art in something like the setting and atmosphere in which they were seen in antiquity; second, to illustrate the important part that color played in classical architecture; and third, to offer the visitor some place where he can find distraction from the customary walk through gallery after gallery, where he can rest and meditate undisturbed by any sound save the tranquil splashing of water."

We wish very much that we could add that in our opinion the execution of this project was as happy as the idea, but such unfortunately is not the case. The completed result has been severely and in our opinion not unjustly criticized in the public press. One critic, after paying tribute to the court in Wing K for its fine spacing, its beautiful works of art and its noble antiquities from the shores of the Mediterranean and the relief which it affords from the closed rooms elsewhere in the Museum, finds little else to praise. He finds the fundamental designing for the most part undistinguished and flat, the proportions without compulsion of elegance or style, the cresting around the top mediocre, the wall panels with their border of leaves more mediocre, the curve of the glass roof over the open space without charm or invention.

But he considers the color to be the least creditable feature of the design. The base, or the lower third rather, of the columns is red, the wall panels black, with a dado of dark red, and there are blues and greens, gray and other colors about the rest of the structure. The black is flat and dead, all the colors are wrong and lifeless. But the red illustrates fairly enough what the trouble is with the whole scheme. The red is supposed to be the famous Pompeian red which is a glowing crimson with rose and vermilion showing through it and keeping it alive. But this red of the walls and columns in Wing K is really Victorian Pompeian red as far from Rome as Queen Victoria is from Sappho. It is mere mixed dead oil paint without surface and tone. "The designers of the court might," says the critic, "have been asleep for two generations or sitting in some mussy clubroom hung with plaster casts and pictures of the Forum." And we agree with him.

Harsh as this criticism is, it is essentially true. The court has the grave disadvantage of being solemn, dull and lifeless. It is a Roman interior as envisaged by the imagination of a middle class British tourist of the last generation—a Bloomsbury classic without a smile or gleam of sunshine or a touch of color, and it will keep alive among the thousands of visitors to the Museum the sad false impression that classic art is awful, pretentious, remote and imposing—something not to be enjoyed and shared but to be stupidly and vacantly revered. HERBERT CROLY.

ROOM FROM THE PALAZZO SAGREDO, VENICE (ABOUT 1718), INSTALLED IN THE NEW WING OF THE METROPOLITAN ART MUSEUM

Enlarging the Capitol Grounds

Recently a Washington newspaper published the Landscape treatment for the newly authorized additions to the Capitol Grounds. As many of the points emphasized are so glaringly wrong and those ignored are so necessary, it becomes a duty to call attention to the commissions and omissions.

Our imagination pictures increased beauty and dignity to the white marble structure as the sole reason for adding to its Grounds.

This purchase gives the landscape architect an opportunity to dignify the North and South approaches and obtain open views that will effectively display the beauties of the structure. In this way the vistas of the Capitol contemplated by L'Enfant, and a hundred years later endorsed by the Park Commission, could be made important elements in the plan.

Let officials study L'Enfant's Plan, together with its restoration for the present generation by the Park Commission. In these schemes will be found broad vision and artistic genius, nothing ugly or trivial mars their conceptions. The magnificent wide open vista giving unbroken reciprocity of sight between the Capitol and the Washington monument, cannot be equalled.

Let us hope that L'Enfant's scheme, now more than a century and a quarter old, will soon be executed as an example for future effort. It will be carried out if our generation is intelligent enough or big enough to appreciate this unsurpassed conception.

The opportunity for broad open views of the Capitol from North and South Capitol Streets, and from Delaware and New Jersey Avenues, should arouse artistic enthusiasm. The condition of Delaware Avenue, between the Capitol and the Union Station has long been a disgrace to the City. One feels the need of a wide Avenue, with trees planted so that they do not, and will not, now or in the future, interfere with full reciprocity of sight between the two structures. The other North and South Streets will give an opportunity for future memorials to end the vistas of those which focus upon the Capitol. These fundamental features have received little or no attention in the plan presented.

When the Railway Station was nearing completion, Senator Wetmore of the Library Committee wished to make it an object of interest visible from Pennsylvania Avenue. To accomplish this purpose, he proposed a broad avenue from the Peace Monument to the Station. The artistic or practical fitness of this scheme, if I am not mistaken, was never considered by a competent jury. The present planner evidently remembered Wetmore's scheme but ignored, or did not appreciate, his object of making the Station visible from Pennsylvania Avenue. His change of direction cutting out a view of the station from Pennsylvania Avenue was made, we are informed, to facilitate the routing of street cars.

In the proposed Landscape treatment, the most serious omission is ignoring Union Square. This may either be ignorance or want of appreciation for the artistic and practical plan presented for this section by the Park Commission. What does the new plan propose in its place? Instead of the forceful rectangle in the center of which is the dominant memorial, they offer a wabbly indefinite curved line of shrubbery enclosing the Grant group on two sides. Grant has been considered of so little importance that he has not even been given a dignified central location. His memorial has been shunted to one side, where its straight architectural lines clash with the curved roadway, and the minor memorials to Garfield and Peace have been so emphasized that they appear more important than the Grant Group. The beautiful and artistic terrace, separating the Capitol Grounds from Union Square, designed by McKim, has been ignored. This, while forming a fitting boundary for the Capitol Grounds, made an exceptionally pleasing background for the statue of Grant and its sculptured groups of Cavalry and Field Artillery on either side. The substitute for this artistic terrace is a wabbly curve breaking awkwardly against the straight architectural lines of the Grant base. If the planting scheme of the plan is followed, Grant will not be visible from Pennsylvania or Maryland Avenues.

The papers call attention to the pride of the town planners in making many of these changes to facilitate the routing of the street cars, from which we might infer that this routing, not the artistic result, was the important end in view.

Our sensibilities are further shocked by the two structures flanking the Grant Memorial, dubbed Botanic Garden and Aquarium. We may easily imagine great ugly glass structures overshadowing Grant, and lacking the dignity for North and South markers of the Capitol Grounds.

An analysis of the landscape scheme as presented shows clearly how necessary it is that the best trained and most capable artist in the country should be employed. The plan adopted should be an artistic expression of our generation. It should enhance the dignity of the Capitol, and furnish a fitting setting for Grant. It is not an engineer's or a traffic routing scheme which is up for consideration, but landscape treatment which will add to the dignity and enhance the artistic value of the United States Capitol and the Memorial to U. S. Grant.

GLENN BROWN.

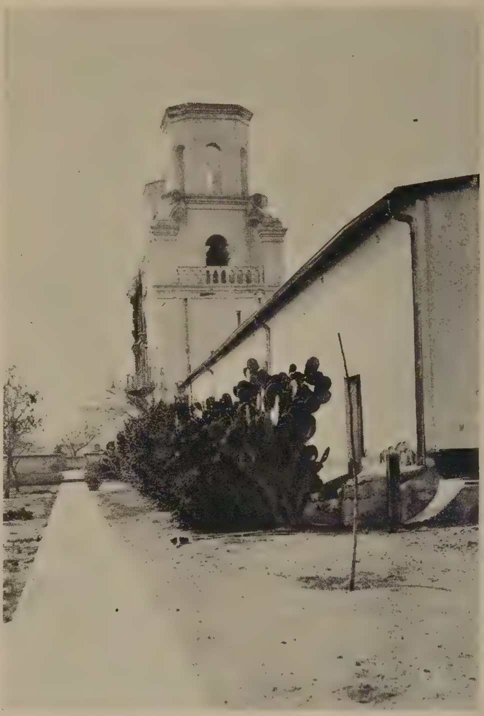
Mission San Xavier Del Bac Near Tucson, Arizona

Few of the old Spanish missions of the Southwest are equal in beauty to San Xavier del Bac, which seems unreal as a mirage in the midst of the grey-green Arizona desert, about nine miles south of Tucson.

Founded about 1700 by the Jesuits, it was not until after their expulsion in 1768 and the coming of the Franciscan fathers to take their place that the present buildings were erected. The dedication took place about 1797, and from that time on the mission passed through various vicissitudes. In 1824 the priests were driven out and the buildings allowed to fall in ruins, but finally, after several futile attempts, religious work was once more established among the Indians, and in 1906 the restoration of the buildings was undertaken.

The church of San Xavier is cruciform in plan and has a vaulted roof with a beautifully proportioned dome over the crossing. Two towers dominate the front, and, as is often the case with European cathedrals, one has never been completed. The walls are of adobe brick, most of which were baked, although a considerable portion of them were merely sun-dried.

The façade is enriched by a great ornamental composition which occupies the entire front between the flanking towers. It is a curious piece of design; effective as a whole, but crude and rather uncouth when studied in detail. Its crudities may be excused, however, when we realize that it is made entirely of baked adobe clay. Although the rest of the building has been restored and replastered so that it is dazzling white under the brilliant Arizona sun, this great mass of ornament stands untouched, and its weather stained surface presents a curious contrast to the setting of white.



Looking West in Forecourt
MISSION SAN XAVIER DEL BAC

The interior is remarkably well preserved. The original wooden pulpit and the doors are in good condition, and the frescos on walls and vaulting are brilliant in color and gold. These decorations are rather barbarous in effect, but not at all out of keeping with the conditions under which they were executed, and the rude Indians, for whose edification and presumable sanctification they were designed.

In addition to the church proper a dormitory wing was carried out to the east at a right angle to the axis of the church. This wing, or a part of it, may have been used originally as a church, for it has the customary orientation, while the church itself stands with its altar toward the north. A provision room occupies the space between the east tower and the transept, and cloisters follow the walls of both church and dormitory.

During the work of restoration the dormitory wing was extended to the north, and an arcaded wall across the fourth side completed the enclosure of a most beautiful patio, the open arches of which frame exquisite pictures of distant purple mountains. This arcaded wall and the low one which encloses the forecourt were both rebuilt on lighter and more ornamental lines than those erected by the padres, for the necessity for protection against hostile Indians had passed, and the original fortifications gave way most naturally to purely ornamental architectural features.

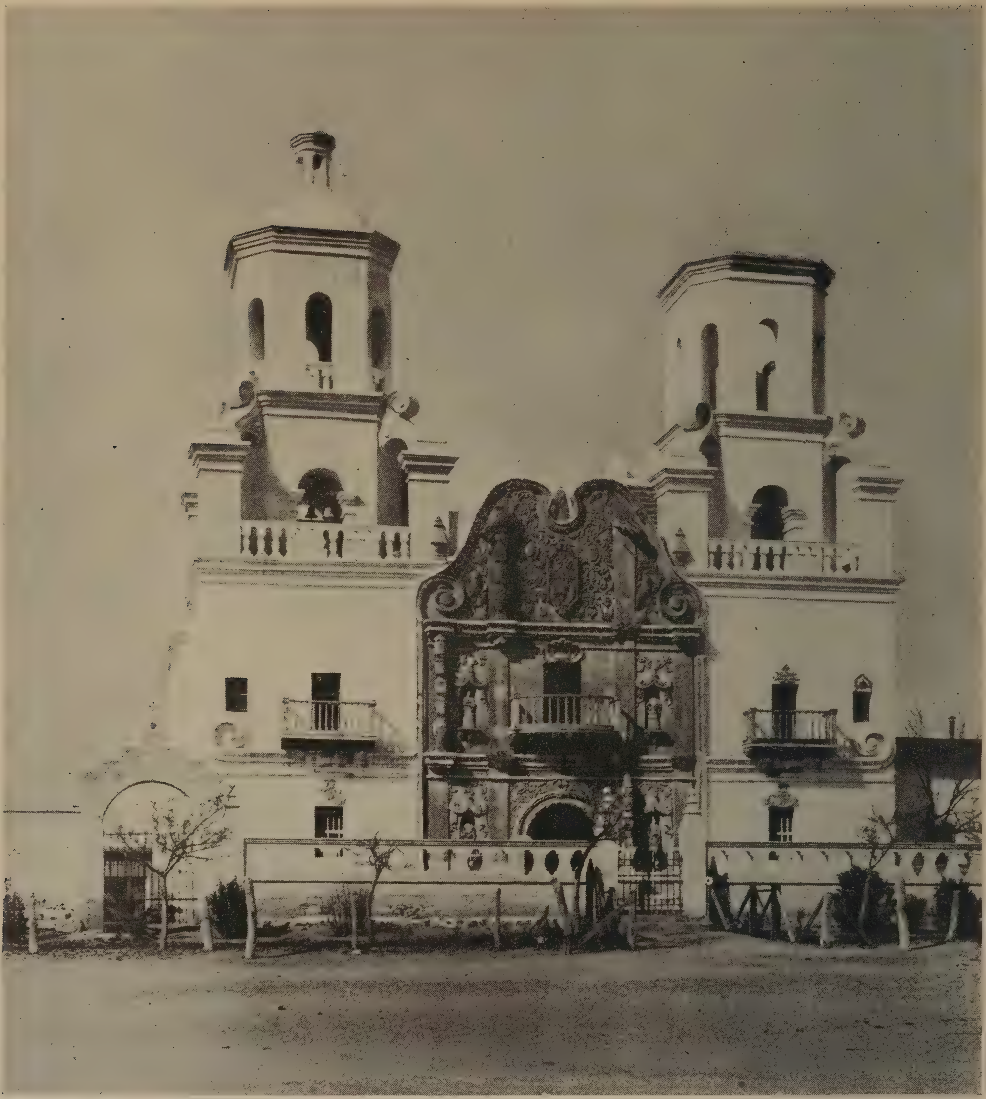
To the west of the forecourt is the old walled burying ground, on the far side of which is the mortuary chapel, the whole forming a pleasing balance to the dormitory wing.

The setting of the mission is a flat plain covered with a low growth of desert shrubs, broken by a group of good sized trees, marking the proximity of a spring whose waters

View from West

View from Southwest

TWO VIEWS OF THE MISSION SAN XAVIER DEL BAC, NEAR TUCSON, ARIZONA



FRONT OF CHURCH, MISSION SAN XAVIER DEL BAC

have for centuries attracted the wandering tribes of the surrounding deserts.

As one sees the mission from a distance, with the dazzling white of its stucco contrasted against the grey-green of the chaparral and the purple of the mountains, it makes a picture that is uncanny in its beauty.

I. T. Frary.

A Correction

It is regretted that the caption on Page 212 of the September, 1926, issue of The Architectural Record attributed the design of the Roosevelt High School, St. Louis, Mo., to Wm. B. Ittner. Credit in this case should have been given to R. M. Milligan, architect, who for the past twelve years has held the position of Commissioner of School Buildings in St. Louis.

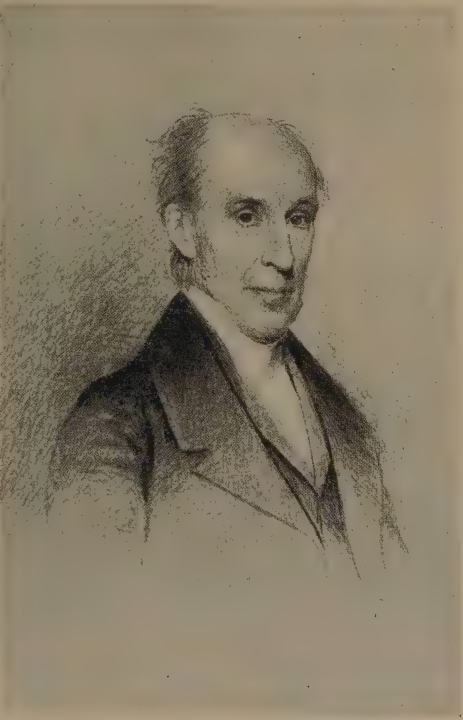
Note—The writer wishes to acknowledge his indebtedness to Mr Prent Duell for data taken from his book "Mission Architecture as Exemplified in San Xavier del Bac."

The ARCHITECT'S LIBRARY

Charles Bulfinch, Architect and Citizen*

Bulfinch kept no diary, and wrote few letters, and almost nothing was written about him until the publication of his Life and Letters in 1896. "For personal coloring we seek almost in vain." His letters, like his buildings, are impersonal.

He was born in 1763 in Bowdoin Square, Boston, in a house built by his grandfather. Father and grandfather were both physicians. His mother was something of an heiress, and she was born into whatever there was of comfort and culture. He graduated from Harvard in 1781, in the midst of the Revolution, in a class of twenty-seven members. Soon after his graduation, he discovered his leaning to architecture, and 1785 was sent abroad for a year and a half. His portrait was painted in London by Walter Brown in 1786, and the drawing reproduced on this page which was made in 1842, a few years before his death, shows the same sensitive face, large eyes and mobile mouth.


CHARLES BULFINCH ABOUT 1842
From *Charles Bulfinch, Architect and Citizen*

His first work after returning in 1787 was the Hollis Street Church, which was taken down in 1810, rebuilt in East Braintree and destroyed by fire in 1897—the first of some fifteen or sixteen Massachusetts churches by Bulfinch. The Beacon Hill Monument was put up in 1789. The first public building erected from his designs was the old State House at Hartford, Conn., 1792. The following year saw him deep in his unfortunate Tontine scheme, a crescent of sixteen houses in Franklin Place. He became deeply involved financially and Boston went through a post war real estate depression, which drove him into bankruptcy about the end of 1795. It was a hard blow. But Massachusetts was beginning to build the New State House on his plans, and his work on it to some extent absorbed and consoled him. The Tontine buildings have long since vanished; but Bulfinch's shapely dome of the State House, strengthened and gilded, still stands, as well as the south front and parts of the interior, much as he made them.

His work is, naturally, in the tradition of Wren and Inigo Jones, his churches modeled after London churches. What the Boston Theater (opened 1794) looked like is only known by the gold medal given him by the proprietors, which shows a columned front of conventional design. The frontal design of the State House seems to have been suggested by the façade of that part of Somerset House in London which now contains the Navy Office.

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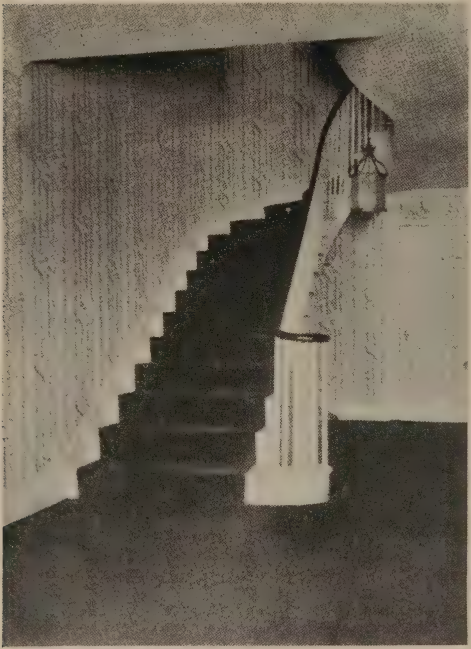
*Charles Bulfinch, Architect and Citizen, by Charles A. Place. Quarto. Illus. Houghton, Mifflin & Co., Boston, Mass. $15.00.

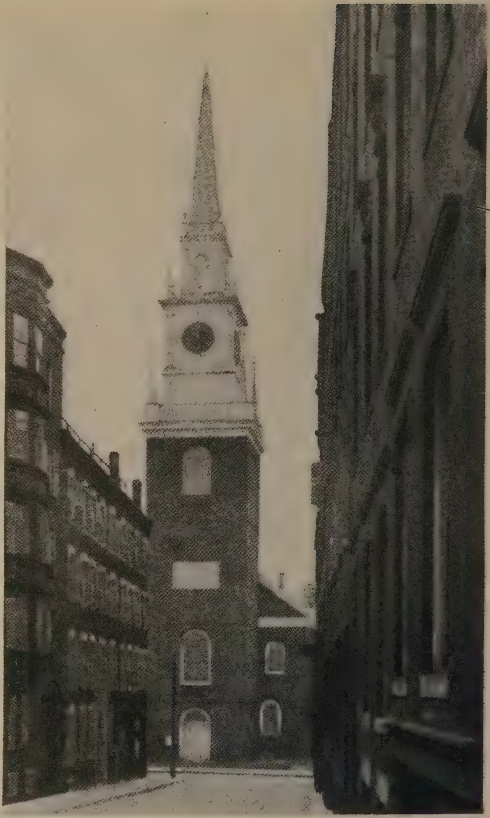
"It has been said that the Beacon Hill Monument, Franklin Place, and the New State House introduced a new era for Boston; all were due to the genius of Charles Bulfinch. This brings us to the year 1799, and the beginning of a new period of service to the town."

He has been named "The Great Selectman" by reason of his twenty-two years (nineteen as chairman) of able and honorable service to Boston on the Board of Selectmen, beginning in 1789. Boston's growth was rapid during most of the period, and Bulfinch had more to do with guiding that growth than perhaps any other man.

Of the numerous private houses that he built during those nineteen years, most have disappeared, and the question what is his and what is not is often obscure, because he never made record of any of them, but among the notable and authentic were the Barrell House in Charlestown; Fay House in Cambridge; the Otis and Higginson Houses, Mount Vernon Street; and No. 55 on the same street. Of his public buildings may be mentioned: The Court House, Worcester, 1801; Massachusetts State Prison, 1805; Enlargement of Faneuil Hall, 1806; Church of the Holy Cross, 1803; St. Stephens Church, Hanover St., the only Bulfinch Church still standing in Boston; Boylston Hall and Market, 1809; Federal Street Church, 1809 (Bulfinch's only attempt at Gothic; the interior had little Gothic except the pointed arches); the Court House, School Street, 1810; the original University Hall, Cambridge; New South Church, 1814 (the best spire he ever designed); the Church of Christ, Lancaster (a very beautiful church, the best proportioned of all his churches, and still in perfect preservation); Pearson Hall and Third Building, Phillips Andover, 1818; Massachusetts General Hospital, 1818-20.



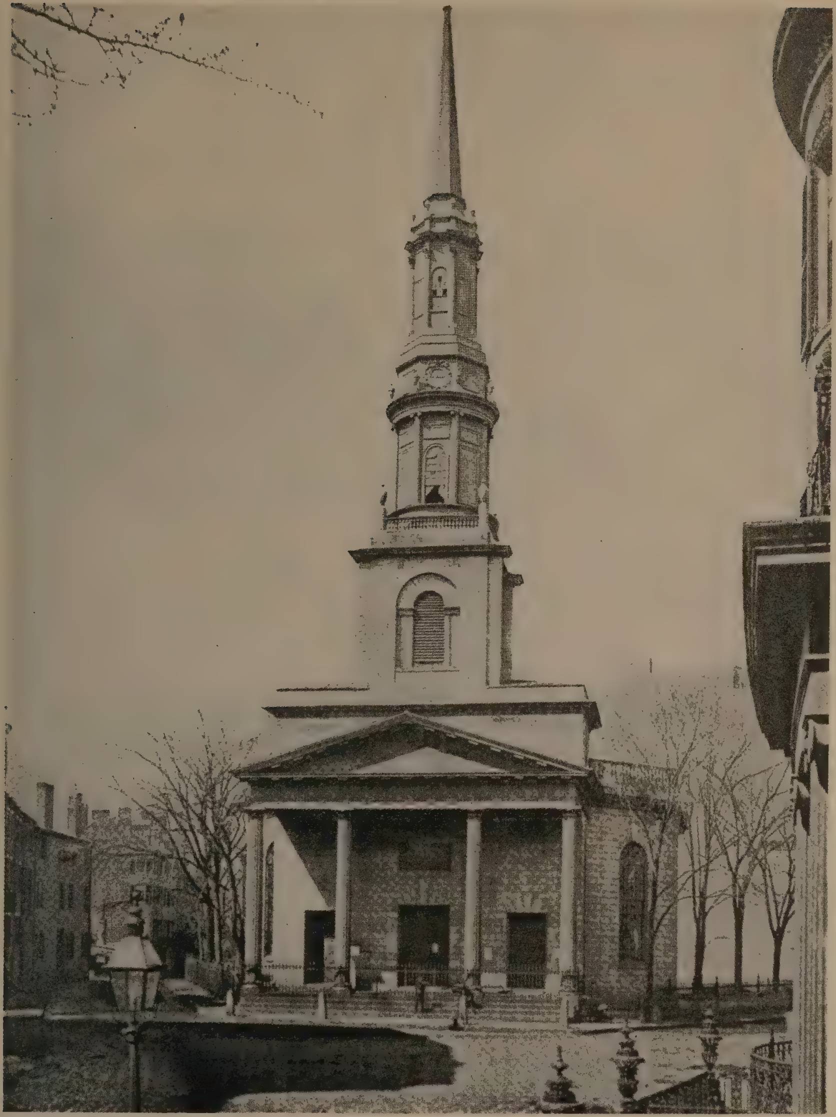
LOWER HALL, 13 CHESTNUT STREET, BOSTON
From *Charles Bulfinch, Architect and Citizen*



CHRIST CHURCH SPIRE, BOSTON
From *Charles Bulfinch, Architect and Citizen*

In 1818 he resigned from the Board, and removed to Washington, D. C., to succeed Latrobe as Architect of the Capitol.

The Capitol, before its later enlargements, was the work of three men, Thornton, Latrobe, and Bulfinch. As the work was already well under way when he took it up, the general de-



NEW SOUTH CHURCH, BOSTON
From *Charles Bulfinch, Architect and Citizen*

sign was not Bulfinch's. Latrobe's dome, however, was quite flat, and Bulfinch was requested to make drawings for a higher one. The one selected by the Cabinet was the highest which Bulfinch offered, and higher than he advised. The Capitol is an imperfect piece of architecture, somewhat accidental in many features. Mr. Place's impression seems to be that it is distinctly better as a result of Bulfinch's appearance on the scene.

He remained in Washington twelve and a half years. The office of Architect of the Capitol was abolished in 1829, and he returned to Boston the following year. The State House at Augusta, Maine, was built, 1829-31, from his design, and was for the most part a copy of the Boston State House, reduced in size.

The remaining years of his life were passed in Boston very leisurely. He seems to have done little more professional work, and died in

BULFINCH DRAWING, PUBLISHED 1826
From *Charles Bulfinch, Architect and Citizen*

1844. He was a gentleman of the old school, a valuable citizen, a public servant without reproach, and the first American born architect. ARTHUR W. COLTON.

English Homes. (Vol. VI. Late Georgian-1760-1820). By: H. Avray Tipping, M.A., F.S.A. New York: Charles Scribner's Sons. 1926. 1st. ed. 416 pp. Ill. 11 x 16 in. Cloth. $25.00.

"It is some 200 years since that great folio entitled *Britannia Illustrata,* with its elaborate landscape views of English country seats, was published, and the fact that a French edition was issued at that time goes to prove incidentally how long these great houses have been famous. It is a century since Neale completed his publication of the 'Views of Seats'; but it has been left to the twentieth century and the resourceful energy of Mr. Tipping to do full justice to England's heritage. 'The creation of that proverbial hybrid, the English home,' wrote a critic in *The Times,* reviewing one of the volumes of this series, 'is really one of the greater achievements of our history and one most typical of our genius.' It is, indeed, something for England to be proud of, and something to grow more conscious of if one after another of these magnificent homes are not to fall into decay or to be broken up.

"It is a wonderful picture we get in these volumes of the glories of English domestic architecture. The interiors of such homes have figured so largely in fiction and in imagination, that it would not be surprising if the reality fell short of expectation: and yet assuredly it does not. They display such a brilliance of decorative genius, such a variety of styles blending in perfect harmony, such a wealth of historical association, that the reader is left at once amazed what earlier centuries achieved and perplexed at contemporary shortcomings.

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The American Spirit in Architecture. Pageant of America Series, XIII. By: Talbot Faulkner Hamlin. New Haven, Conn. Yale University Press. 1926. 1st ed. 353 pp. Ill. 7½ x 10 in. Cloth. Vol. XIII. $4.50. Sold only in set at $67.50, 15 volumes.

Bungalows. By: Henry Hodgman Saylor. New York: Robert McBride & Co., 1926. 4th ed. (Revised.) 206 pp. Ill. Cloth. $3.50.

Covers the whole fascinating problem of building the summer home or permanent bungalow.

Corrosion, Causes and Prevention. By: Frank N. Speller, D.Sc. New York: McGraw-Hill Book Co., Inc., 1926. 1st ed. xii. 621 pp. Ill. 5¾ x 9 in. Cloth. $6.00.

A useful reference book for those who are interested in any of the many phases of the corrosion problem, and a handbook for the engineer and architect who may desire a practical knowledge of the developments in the prevention of corrosion. The book has been written with particular reference to the ferrous metals. It is a complete and authoritative summary of the available information on corrosion, carefully classified for practical use.

Ship Model Making. By: Captain E. Armitage McCann. New York: The Norman W. Henley Publishing Co., 1926. 1st ed. xiv. 129 pp. Ill. 6 x 9¼ in. Cloth. $2.50.

A practical and timely book which describes with full scale drawings, how to make a Picturesque Barbary Pirate Felucca and a Beautiful Spanish Treasure Galleon (both of the 17th century).

The author, a well known expert on old ships and model maker, has so ingeniously simplified the text and drawings that any handy person can make these models with a few simple household tools, almost without expense.

The Design of Small Properties. By: M. E. Bottomley, Landscape Architect. The Rural Science Series. New York: Macmillan Co. 1926. 1st. ed. xiv. 233 pp. Ill. Diagrs. 5⅞ x 8¾ in. Cloth. $3.00.

Well-planned home grounds, even though small, add a pleasant room to the house. This book presents many plans for the artistic and convenient development of city and suburban residence lots and farmsteads, together with explanations of the pictorial points to be established by the use of the various plans. It has a chapter on accessories and garden architecture, one on planting and maintenance in connection with design, and also anotated lists of woody plants and herbs that may be employed for the producing of artistic effects. The book will be useful to those who wish to obtain the most satisfactory results at reasonable cost in the planning of home grounds of the usual dimensions, for which clear advice may not always be available.

Painting and Wood Finishing. By: William S. Lowndes, Ph.B. Scranton, Pa. International Textbook Co. 1926. 1st ed. v. 98 pp. Ill. 5¾ x 8⅝ in. Cloth. $1.50.

A manual for the painter, architect or owner of the building giving the quality of various paints and finishes and the materials on which they can best be used.

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Refrigerators. "McCray Refrigerators for Grocers and Butchers." Catalog No. 66. Description of system used. Particulars of construction. Various models with details as to size, weight, etc. Refrigerator counters. Data for mechanical refrigeration. McCray Refrigerator Sales Corp., 662 Lake St., Kendallville, Ind. 7¼ x 10 in. 64 pp. Ill.

Brass Pipe. "The End of Rust Troubles." How to assure a full and clean flowing water supply. Notable installations. Copper Boilers. Plans showing brass pipe plumbing for the home. Reasons why Brass Pipe is economical. Copper & Brass Research Association, Room 1600, 111 Broadway, New York, N. Y. 7⅛ x 10¾ in. 16 pp. Ill.

Brass Pipe. "Practical Brass Pipe Plumbing." 2nd ed. 29b4. How to cut, thread and install brass pipe. Tables of pipe sizes and capacities and list of manufacturers. Copper & Brass Research Association, Room 1600, 111 Broadway, New York City. 5⅝ x 8½ in. 46 pp. Ill.

Windows. Catalog G-26. A. I. A. File No. 16. Top and bottom sliding ventilator windows for schools, banks and public buildings, fitted with the Boca Bronze Guide. Specifications for windows with various types and sizes and standard installation details. The Bogert & Carlough Co., Straight Street, Paterson, N. J. 8 x 11 in. 16 pp. Ill.

Laundry Machinery. A. I. A. File No. 35D. Functions of the hotel and hospital laundry. Prints of the laundry plans in the various hotels and hospitals. Description of necessary machinery. The American Laundry Machinery Co., Norwood Station, Cincinnati, Ohio. 8½ x 11 in. 8 loose-leaf sheets. Ill.

Conduit Systems. "Wiremold Wall Chart." Complete information on the Wiremold Conduit System, including dimensions and installation suggestions. The Wiremold Co., Hartford, Conn. 22 x 16 in. 4 sheets. Ill.

Elevator Door Closers. Advantages and features of double cushioning door closer for manual operation and rotary electric interlock. Elevator Supplies Co., 1515 Willow Ave., Hoboken, N. J. 8½ x 11 in. 12 pp. Ill.

Steel Beams. Bulletin No. 2. Information and tables relative to the J & L JUNIOR beam, of light-weight, rolled-steel. Sizes, weights and properties with full descriptions and specifications. Maximum allowable spacing on various spans, etc. Tests made. Jones & Laughlin Steel Corp., Ross St., Pittsburgh, Pa. 8½ x 11 in. 56 pp. Ill.

Door Beds and Space Saving Conveniences. A. I. A. File No. 35n9. Book F103. Booklet dealing with various articles including beds, kitchen cabinets, etc., which take up little space. Construction details. Plans of "efficiency" apartments and houses. The new DuO-Unit Kitchenette. Typical installations. The "White" Door Bed Company, 130 North Wells Street, Chicago, Ill. 8¾ x 11¼ in. 80 pp. Ill.

Hardware. A. I. A. File No. 27-B. "Early English and Colonial Hardware." Designs of door handles, knobs and escutcheons, key plates, locks and latches, hinges and hinge plates, knockers, electric push buttons, casement fittings, bolts and drawer hardware. P. & F. Corbin, New Britain, Conn. 8½ x 11 in. 32 pp. Ill.

"Wiring the Home for Comfort and Convenience." Complete specifications and particulars. Diagrams showing typical arrangement of lights and switches. Suggested uses for the Fan Hanger outlets. Frank Adam Electric Co., 3650 Windsor Place, St. Louis, Mo. 7¼ x 10¾ in. 8 pp. Ill.

Blue printing and the drafting room. Catalog G. Complete and detailed information of blue printing machinery, blue print paper, lamps, blue printing accessories, drafting room supplies and furniture, drawing and surveying instruments. Descriptions of sizes, qualities, method of use; price list. The C. F. Pease Co., 877 North Franklin St., Chicago, Ill. 6 x 9¼ in. 372 pp. Ill.

Paint. Decorative Possibilities of Paint. Various designs including striping, sponge-mottled, lace stencil, etc., with detailed description of application. Suggestions for using the various types. A. I. A. 25d3. National Lead Co., 111 Broadway, New York City, N. Y. 5⅜ x 7½ in. 24 pp. Ill.

Steel Kitchen Cabinets. Catalog No. 2. Smith quality steel kitchen cabinets and sectional units for residences, apartments, hospitals and institutions. Construction and finish of products, with specifications and sizes of standard units. Smith & Hildebrandt, Inc., Olean, N. Y. 5½ x 8½ in. 16 pp. Ill.

Bathroom Cabinets. Catalog No. 6. White sanitary steel bathroom cabinets, linen, kitchen and radiator enclosure cabinets. Various models with details of size, style and weight. Installation details. Typical installations. Parr Metal Products Corp., 3519 41st St., Long Island City, N. Y. 4 x 9¼ in. 18 pp. Ill.

Brass, Copper & Bronze. Sheets, tubes, rods, wire, rivets, nails, etc., in stock and ready to ship. Catalogue (9th ed.) of products with general information and data in relation to weights, sizes, etc. U. T. Hungerford Brass & Copper Co., Hungerford Bldgs., Lafayette, White and Franklin Sts., New York, N. Y. 7½ x 10½ in. 64 pp. Ill.

Lime. Bulletin 315. "Putting Quality into Concrete Products." The advantageous effects of lime content. Proportioning data of mix. Table of strength of blocks. Tests and results. National Lime Association, 918 G. Street, N. W., Washington, D. C. 6⅛ x 9¼ in. 16 pp. Ill.

Water Softeners. Graver Zeolite Water Softener. Bulletin No. 509, A. I. A. File No. 29d32. Methods of water softening and filtering. Specifications. Detailed data regarding operation. Graver Corporation, East Chicago, Ind. 8½ x 11 in. 12 pp. Ill.

Fire Protection. Various hose units, cabinets and racks with methods of attachment, diagrams and dimensions. Pressure regulation data and fire department control units with a diagrammatic layout of fire pump and single standpipe system. A. I. A. File No. 29e2. W. D. Allen Manufacturing Co., 566 West Lake St., Chicago, Ill. 8½ x 11 in. 24 pp. Ill.

Concealed Beds. Holmes Concealed Beds save floor space and combine utility and comfort. Details of size, design, construction and advantages, with latest modern improvements. Installation charts. Concealed Bed Corporation, 58 E. Washington St., Chicago, Ill. 4 x 8¾ in. 40 pp. Ill.

Cork Tile. Crescent Elastic Tile Floors for Apartment Houses, Hotels, Hospitals, Theatres, Residences, etc. Advantages, composition, standard sizes and installation. Service details and typical installations. United Cork Companies, Flooring Dept., Lyndhurst, N. J. 8⅜ x 10⅞ in. 8 pp. Ill.

Bridging. Blaw-Knox Tru-Tye Steel Bridging. Folder giving description of Bridging and advantages by no nailing, cutting or fitting. Sizes and weights. Also sheet of instructions for use. Blaw-Knox Co., Blaw-Knox, Pa. Ill.

Lavatories. "Invisibowl," the concealed lavatory. Description of various models with general specifications. Advantages and installations. Invisibowl Manufacturing Corporation, 38 S. Dearborn St., Chicago, Ill. 8½ x 11 in. 12 pp. Ill.

Valves. "Homestead Valves." Catalog No. 33. 1926-1927. Valves for all industrial purposes including plug type valves, full round opening valves, protected seat globe valve and hydraulic operating valve, etc., with prices. Homestead Valve Manufacturing Co., Inc., Homestead, Pa. 6 x 9 in. 52 pp. Ill.

Valves. Tabulation sheet showing comparison of figure numbers of bronze and iron body valves. Scott Valve Manufacturing Co., 3963 McKinley St., Detroit, Mich.

Drinking Fountains. Catalogue M. Sanitary drinking fountains, ice-cooled fountains and specialties. Advantages, full details, particulars, sizes and prices. Century Brass Works, Inc., Belleville, Ill.

Paint. A. I. A. File No. 25a21 or 25c. Standard Specification for the use of White-Lead Paint. Preparation and general requirements, materials, mixing and application of the paint. A. S. T. M. and Government Specifications. National Lead Company, 111 Broadway, New York City. 7½ x 10⅝ in. 32 pp.

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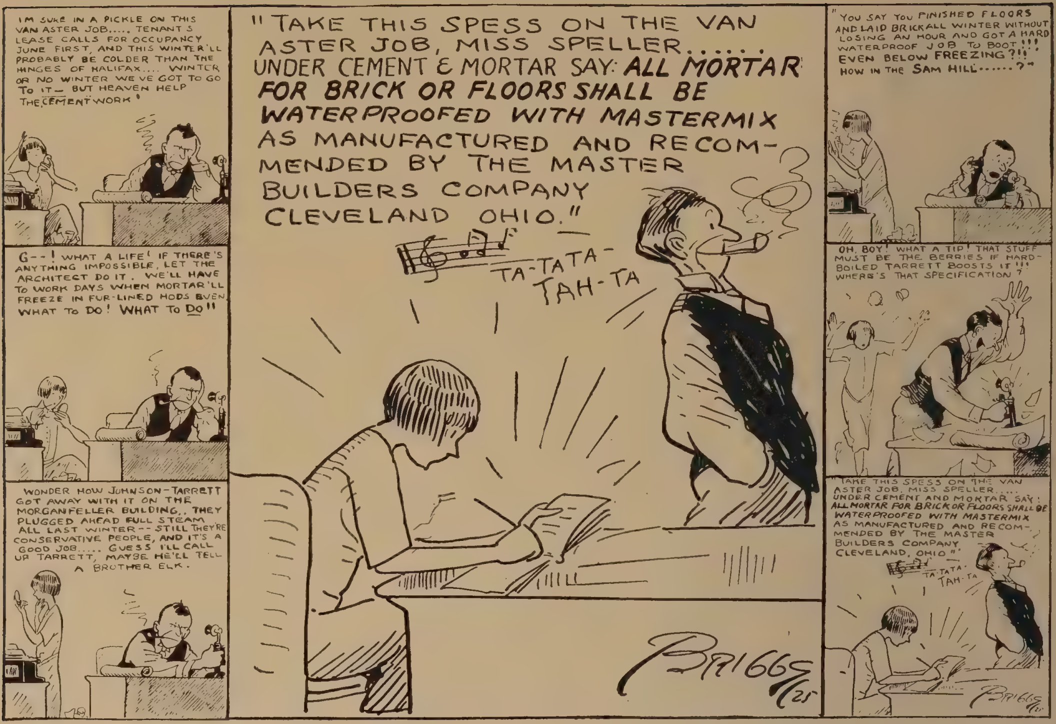
The ARCHITECTVRAL RECORD

COVNTRY HOVSE NVMBER

NOVEMBER 1926


IM SURE IN A PICKLE ON THIS VAN ASTER JOB..... TENANT S LEASE CALLS FOR OCCUPANCY JUNE FIRST, AND THIS WINTER'LL PROBABLY BE COLDER THAN THE HINGES OF HALIFAX.... WINTER OR NO WINTER WE VE GOT TO GO TO IT— BUT HEAVEN HELP THE CEMENT WORK!
G--! WHAT A LIFE! IF THERE'S ANYTHING IMPOSSIBLE, LET THE ARCHITECT DO IT. WE'LL HAVE TO WORK DAYS WHEN MORTAR'LL FREEZE IN FUR-LINED HODS EVEN WHAT TO DO! WHAT TO DO!!
WONDER HOW JOHNSON-TARRETT GOT AWAY WITH IT ON THE MORGANFELLER BUILDING,. THEY PLUGGED AHEAD FULL STEAM ALL LAST WINTER -- STILL THEY'RE CONSERVATIVE PEOPLE, AND IT'S A GOOD JOB..... GUESS I'LL CALL UP TARRETT, MAYBE HE'LL TELL A BROTHER ELK.
"YOU SAY YOU FINISHED FLOORS AND LAID BRICK ALL WINTER WITHOUT LOSING AN HOUR AND GOT A HARD WATERPROOF JOB TO BOOT!!! EVEN BELOW FREEZING?!! HOW IN THE SAM HILL......?"
OH, BOY! WHAT A TIP! THAT STUFF MUST BE THE BERRIES IF HARD-BOILED TARRETT BOOSTS IT!!! WHERE'S THAT SPECIFICATION?
"TAKE THIS SPESS ON THE VAN ASTER JOB, MISS SPELLER..... UNDER CEMENT AND MORTAR SAY: ALL MORTAR FOR BRICK OR FLOORS SHALL BE WATERPROOFED WITH MASTERMIX AS MANUFACTURED AND RECOMMENDED BY THE MASTER BUILDERS COMPANY CLEVELAND, OHIO"
TA-TATA-TAH-TA
"TAKE THIS SPESS ON THE VAN ASTER JOB, MISS SPELLER..... UNDER CEMENT & MORTAR SAY: ALL MORTAR FOR BRICK OR FLOORS SHALL BE WATERPROOFED WITH MASTERMIX AS MANUFACTURED AND RECOMMENDED BY THE MASTER BUILDERS COMPANY CLEVELAND OHIO."
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BRIGGS '25

However, This is a Serious Matter

THE matter of waterproofing winter cement mortar may be treated lightly by the cartoonist but not by the Architect. Both the structural soundness of and the profit in cold weather construction are usually directly dependent on waterproof brickwork and hard floors completed at normal speed despite low temperatures. Even a cartoonist fails to see anything funny about porous mortar joints, dusting cement surfaces, or weeks of time lost because the mortar won't set.

During the past ten winters hundreds of important buildings have been completed without delay or injury by cold—through the use of *Master Mix* in the mortar. Among these winter-built buildings are: The Statler Hotel, Buffalo; Liggett Bldg., N. Y. C.; Union Trust Bldg., Cleveland; Pershing Square Bldg., N.Y. C.; Field Museum, Chicago; Keith Palace Theatre Bldg., Cleveland; Saks Fifth Avenue Store, N.Y. C.; Harvard Business School, Cambridge and many others of equal magnitude.

The adoption and use of *Master Mix* in mortar as a standard cold-weather measure by more than a score of the country's leading builders and the increased volume of annual winter construction are not merely coincidental.

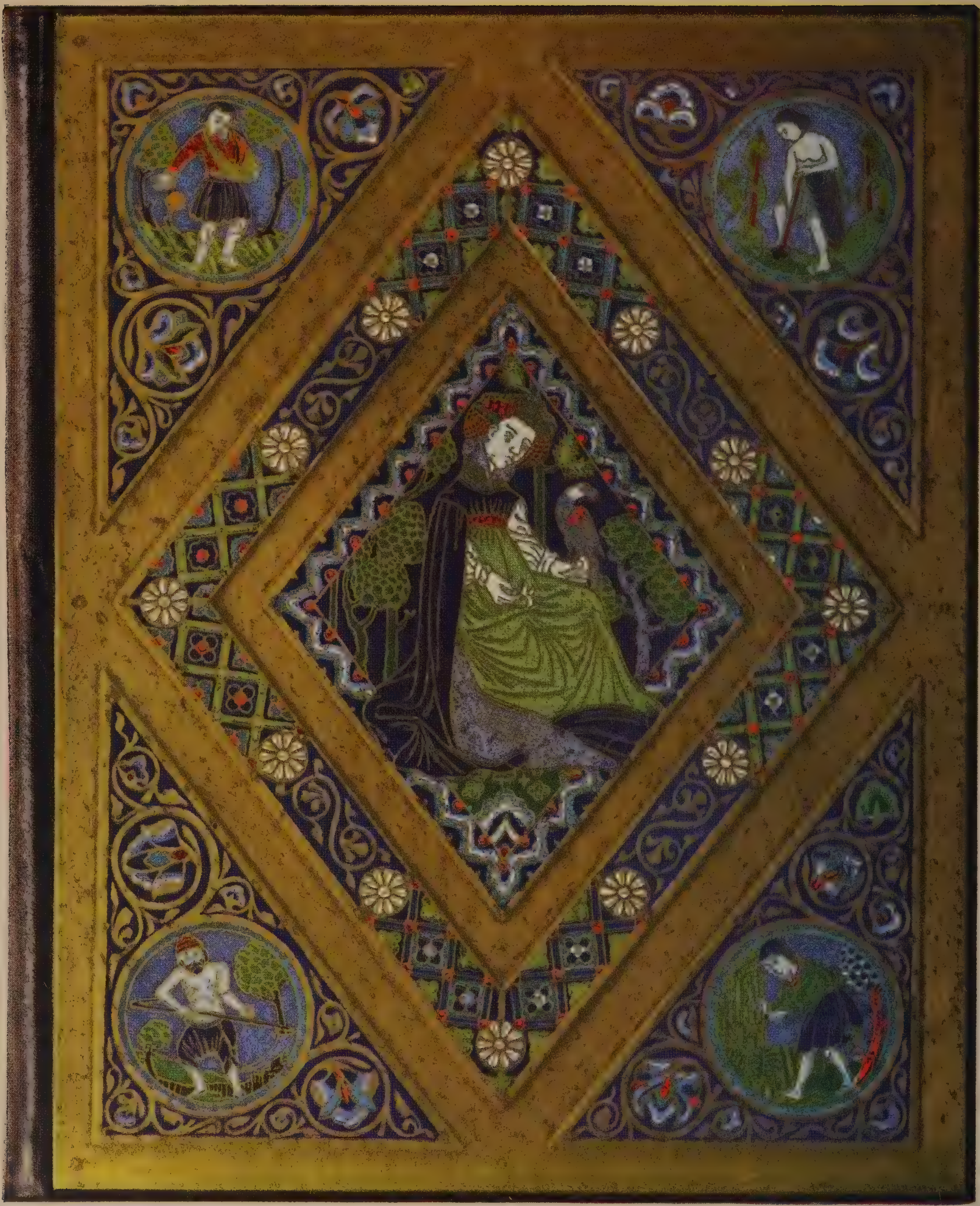
Send for the Book: "Safeguarding Winter Brickwork", and see how progress and profits were insured on the above winter-built jobs.

THE MASTER BUILDERS COMPANY, *Cleveland, Ohio*

Master Mix

A blotter cover in enamel executed by Messrs. Edward F. Caldwell & Co., Inc., after the fashion of old French Champlevé enamels of the Fourteenth Century.

The designer, V. F. Von Lossberg, though adhering to the mediaeval, has carefully avoided ecclesiastical motifs in his details, and has originated, as a substitution, scenes depicting the outdoor life of the peasantry and nobility of the Middle Ages.



A BLOTTER COVER IN ENAMEL

The
ARCHITECTVRAL
RECORD

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The COUNTRY HOUSE

Are We Developing an American Style?

By A. LAWRENCE KOCHER

At no time in the history of our country has so much been spent for the material betterment of the home—its design and construction, its setting, its furnishing. More than a billion and a half dollars was expended last year in the United States for domestic architecture alone. Contracts for country houses have trebled since 1918. This marvelous growth has given the architects freedom to express themselves in a very individual and very American way. For it is obvious that the beauties and exigencies of a rural landscape do permit more elbow room and more space for originality than can be found in any but the most spectacular of urban structures.

Wealth alone would not, of course, guarantee the building of beautiful country houses, or of any country houses at all. There must first be the desire for a country life and the possibility of living comfortably in the country. And there must also be good taste on the part of the client and imagination on the part of the architect. Taine has remarked that "to change the idea of such a general thing as form, what a change must take place in the human brain!" Buildings are created in the heads of men before they are put together in stone, brick, cement or wood. We may say that there has been a change inside the American head which has made possible a richer development of country house architecture.

Our cities have been growing with what appears to some observers, alarming rapidity. Yet perhaps they have not changed so rapidly or so vitally as have the suburbs and the near-by rural districts, to which the wealthy and the growing upper middle class have resorted in increasing numbers. This growth of suburban communities is in part due to the increasing discomforts of life in large cities. It is due, also, to the perfection of the automobile and the spread of good roads. The convenient radius of country life has been extended. It is no longer necessary to hug the railway lines closely. The abandoned farm and the sometimes equally abandoned farmer have given way, over large areas, to the suddenly mobile man from the city.

Not that country house life is a new thing. Indeed, if we go back a few centuries, it would be nearer the truth to say that city life is new. The country house as an architectural type traces its ancestry to the French *manoir,* the English *country seat,* the German *Landhaus* and the Italian *villa.* Embedded in it are centuries of history. Long generations of living in the country and long-established customs have given each type a clearly defined identity. Each has its own national and architectural characteristics, not invented arbitrarily by the builders but growing out of the exigencies of existence.

The modern American country house, so far as it is a growth and not an imitation, derives from several strains, but principally from the English mansion. It made its first appearance in America long before the Revolution, notably along the rivers of the South and throughout all of the old Atlantic states. In many cases, where the estate was large and wealthy, or where it lay near one of the larger cities, it was of considerable size and commanding importance. Such country seats as Shirley on the James and Mount Pleasant, near Philadelphia, are typical. They were intrinsic parts of a manner of living, out of which they grew. The house expressed the owner; it did not, as one fears is sometimes the case now, suppress him. It was a place of ample hospitality, the center of an intelligent, refined and chivalrous society. It could out-match the city itself at the game of polite amenities and kept in close touch with the best that was being thought and said in the world.

But the country house on this scale—the Country House, to give it the capitals it seems to deserve—was a product of an aristocratic tradition which was doomed to wither. Democracy did not come in over night with the Declaration of Independence, but it did spread out over a long period of years thereafter, and as it spread country house life decayed. The breaking up of old fortunes, the superior attractions of the cities, the endless migrations of American families, were among the causes. America had no entail to hold its properties together. In the South the country house lingered longest, but the Civil War and the abolition of slavery proved its death blow. Life went out of it. There were even cases in which the forest reconquered old plantations and made ghostly ruins of what had once been the scenes of a busy and even lovely existence. The affairs of government, the Westward movement, and the race for wealth engaged the interest of the entire nation; the cities filled and grew by leaps and bounds, and the country fell away year by year.

The country house, new style, is the product of a later and different tradition. During the 'eighties it became almost the universal fashion for city people to spend a few days during the hot season at the "summer resorts," "the springs," or "the seashore." Newport and Saratoga set the pattern for an extensive seasonal life of this sort. In time many people of means escaped from the increasingly uncomfortable city to a "cottage retreat" in the country. But the era of bad taste was at its height; the country cottage was a shocking spectacle.

However, toward the close of the Victorian era, when the country house again became important, the taste which fashioned it was improving and it began to adapt itself more distinctly and logically to the life which was intended to be lived in it.

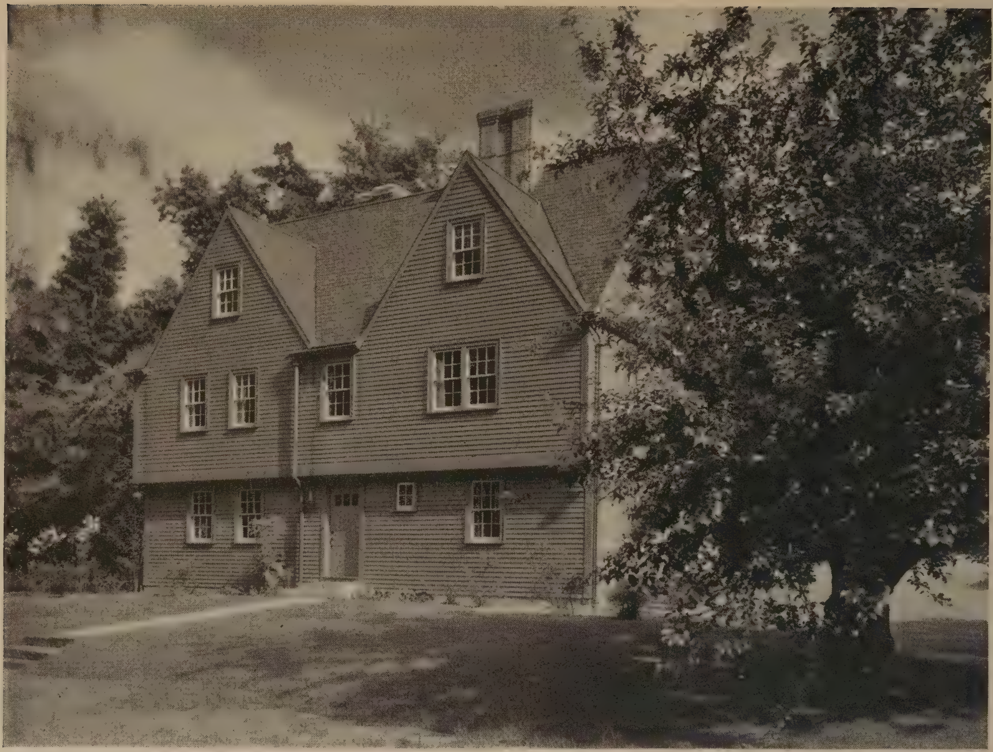
Meanwhile the conditions affecting suburban life had altered. Commuting trains, trolley cars, for a time the bicycle, and finally the automobile, released a large part of the city populations. The area within a radius of about twenty miles around every large city became, and is increasingly becoming, a part of the city itself. Little suburban communities coalesced into larger ones.

First the suburban development took the form of individual homes, each with its lot, lawn and garden. Then the lots grew smaller. Finally came the extraordinary development in suburban apartment houses, which in the neighborhoods near New York city and Boston have taken up the choice locations and destroyed the desirability of many once rustic sections. Meanwhile land values have risen so that the moderately well-to-do cannot afford to pay them, and the wealthier classes have chosen to spend their money on homes further out. Thus the country house proper has been crowded further and further beyond the perimeter of the city and into the country. Often, in the cases of the wealthy, the country house and the elaborate apartment in the heart of the city are parts of a well-planned scheme of living; the owners do not attempt to compromise between city and country in some half-way fashion, but live an urban life for a part of the year and a rural life for another part. They acquire large tracts, with wooded areas and a variety of natural beauty, using the services not only of the architect but of the landscape gardener. Rocky knolls, land overlooking water and areas in the midst of trees prescribe for the architect the exterior treatment and the arrangement of his plan, and there is abundant opportunity for experimentation. Building activity varies with the ups and downs of the stock market, but over a period of years the country house is definitely on the increase. The golf course, the country club, the multiplication of motor cars, the extension of electric power lines, the shortening of business hours, the longer vacations taken by business men, the habits and traditions growing around our new species of country gentry, all accord with it.

That is to say, the twentieth century country house has the modernity and vitality that, in their time, belonged to the country houses of the eighteenth century. It exists because it serves a purpose. Consequently we might well expect its remaining archaic qualities to disappear in the course of time, and a type of structure expressive of modern America to take its place. A purpose of this review is to call attention to some prevailing tendencies, as displayed in current country houses which do show evidences of originality in design. The accompanying illustrations do not cover all possible divergencies in style, but I have tried to select types which represent either the fresh and unique conceptions of the architects, or distinctive local tendencies. If one section of the country seems to receive greater attention than another it is because it has evolved a greater variety of original specimens that demand consideration.

Despite the levelling tendencies of quick communication and the standardization of much of the machinery of American life, the country houses of the East, Middle West, South and West are still architecturally distinct. In most instances, in fact, one can correctly place the location by the style and treatment. This is an indication—an encouraging one, it seems to me—that climate and local tradition are effectively influencing design. Typical of their locations are the Bratenahl house by Bellows and Aldrich (Pages 480 and 481) for the East, the house in Cleveland by Charles R. Greco (Pages 425 and 426) for the Middle West, and the house for R. E. Overell, Esq., designed by David Malcolm Mason (Pages 463-466) for the Far West. Messrs. Bellows and Aldrich have stuck pretty closely to their seventeenth century Colonial model, though this is but one of several styles adhered to by the typical Eastern architect. Mr. Greco's house, true to the independent mood of the country beyond the Alleghenies, has no affinities with any single or set tradition. The example from the Far West is as "racy of the soil" that produced it as any New England house on the rolling hills of Massachusetts.

The work of the year allows one to believe that American architects no longer feel it necessary, as they did even ten or fifteen years ago, to tie themselves to one of the "Historic Styles." This is a hopeful sign. "How would the literary artist like it?" asked Percy Nobbs, some years ago, "if the principal criterion of public

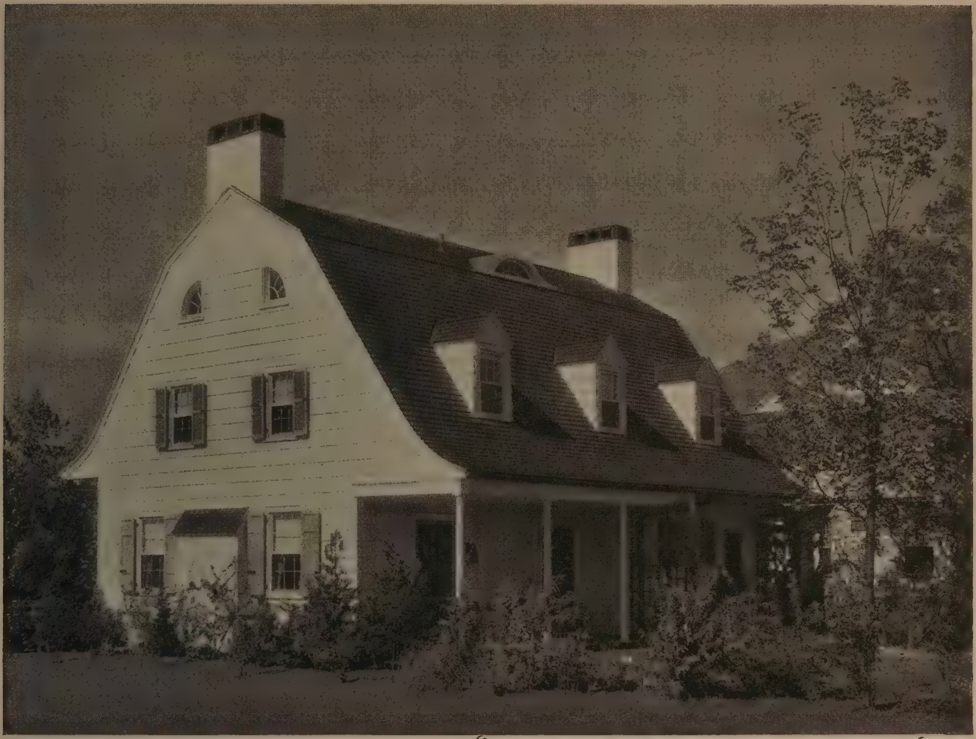


HOUSE FOR DR. HENRY JACKSON, JR., CHESTNUT HILLS, MASS.
Strickland, Blodget & Law, Architects

appreciation amounted to the citation of arid resemblances with respect to ancient models—if the first thing to be remarked about the style of a novel was that it was Fifteenth century Italian or a song that it was Queen Anne? But architecture is expected to thrive under this handicap, inspired by the superficial information which is the hallmark of our time—something far more difficult and dangerous than honest ignorance." But already the tendency of which Mr. Nobbs so justly complained is growing weaker. Dominant personalities or congenial groups of architects are actually gaining courage to think and build for themselves, as though they were Twentieth century Americans and not Fifteenth century Italians or Englishmen of the reign of Anne. They are making the past their servant instead of their master. Their work is seldom of purely English, French or Italian derivation but more often of mixed origin adapted to its modern purposes.

Actually, a few chosen styles dominate —the English domestic of the seventeenth and eighteenth centuries, the English Georgian, though that is increasingly rare, and the lesser buildings of France and Spain. But these have been merged into designs that only faintly resemble the prototypes. Styles are often mixed, with a fine disregard for the opinions of the purists. Notice, for instance, the house in Chestnut Hill, Pennsylvania, by Willing, Sims and Talbutt (Pages 406-408). Houses such as that designed for Mr. Albert Wilson by Peabody, Wilson and Brown (Pages 396-399), cannot be attributed to any specific style.

Hilaire Belloc, in "The Return of the Norm," has said, "The characteristic of our time in architecture is chaos." The indictment strikes home, even in America. Yet we are feeling our way toward



HOUSE FOR W. S. STAIR, ESQ., BELLEROSE, L. I.
Lewis E. Welsh, Architect

new forms and a new coherence. Having started by imitating the European we have reached the place where we are venturing to be original, local and native. The case is comparable with Walt Whitman's adaptation of European verse models to the informality of life on a new continent—though one would not go so far as to describe our architecture as a "barbaric yawp." America is proving a melting-pot for styles rather than a fertile field for transplantation. The work of our architects begins to show a spirit of buoyant experimentation. We are endeavoring to set forth what is new and fresh, not because it is new but because of an intense revulsion against what is old and tried and worn out. We are acquiring the self-confidence, almost the arrogance, which is necessary for any creative period in the arts.

The spirit of the age in America is restless, uneasy, inventive. It seeks in architecture new combinations of line, mass, texture—a more intense appropriateness and significance. It takes European affinities, native elements and ingenious original features and is often able to mingle them with a superb independence, free from the "archeological taint." There is a temptation, perhaps, to overestimate what has been achieved because one so clearly sees what it is possible for the American temperament, once liberated from its European obsessions, to achieve. In many ways we are still untamed, still fumbling and groping in our efforts to escape from the thousand-year-old labyrinth of architectural tradition. But we are definitely in revolt. We are no longer satisfied to reproduce gracefully the conventional models. Why, in this land of corn and mountains, of deserts and Ford factories, should we not have an artistic mind of our own?

East, West and South are alike influenced by the new movement. The

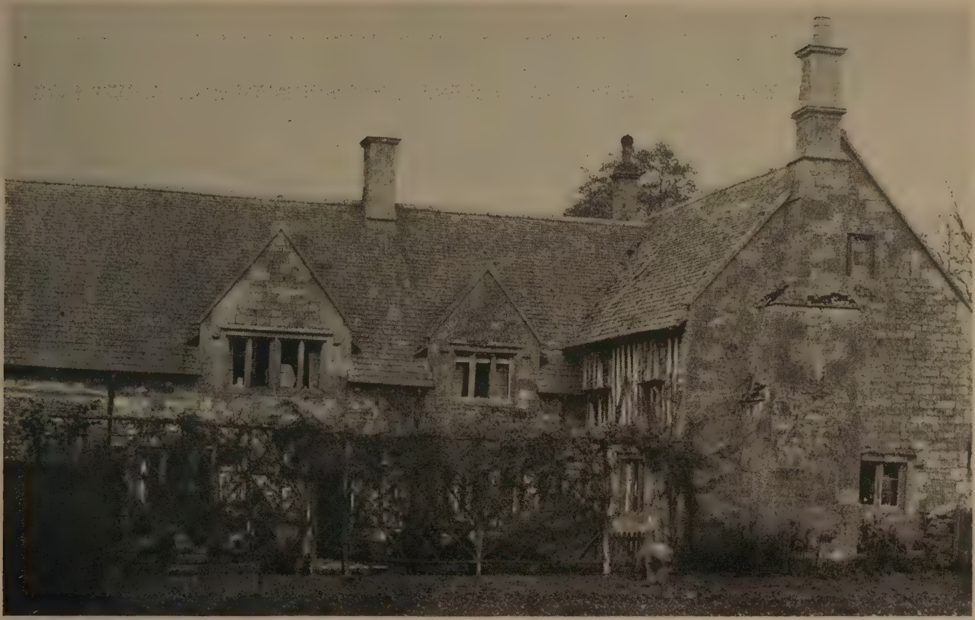
Far West has played with the Spanish tradition for which in many ways it was well fitted by climatic conditions, but it is no longer hampered by it. Certain accidental factors have given the Pacific coast a vigorous individuality. For one thing, its isolation from the rest of the country has encouraged it to go its own gait, relatively little influenced by what was being done in the East. Then the fear of earthquakes has caused the almost complete elimination of brick and led to the adoption of tile, concrete, adobe and wood. Much has been done in developing an architecture of stucco. The architects have been imaginative enough to foresee the dreadful results if they were to make every home a copy of a Spanish mission. They have gone far afield to combine with their native sources such borrowed elements as the Moorish, the Mexican, the Andalusian, and the South Italian. The resulting style is their own, flexible because of the very variety of its elements. They may start with the wonderfully picturesque California ranch house of the old regime, but if you study their effects you perceive that it is the manner but not the identical characteristics of the old windows, doorways, low rambling lines, and other details that they have employed. They may speak Spanish, but it is with an accent all their own. Their country houses have the old world air, possibly, yet they are essentially a new creation, out and out American. They are more American, indeed, than if one were to attempt to sprinkle Colonial homesteads of the New England type upon the glowing reds and browns of the Western landscape.

The residence of Mr. George F. Steedman (Pages 471-474) is just such a composite house as I have indicated, Spanish only in essence. One would need to analyze it very minutely in order to determine its sources. But no California architect takes his derivations too seriously. Architecture has developed because from time to time in the past architects have had new ideas. Why shouldn't a new idea be born in California in the Twentieth century?

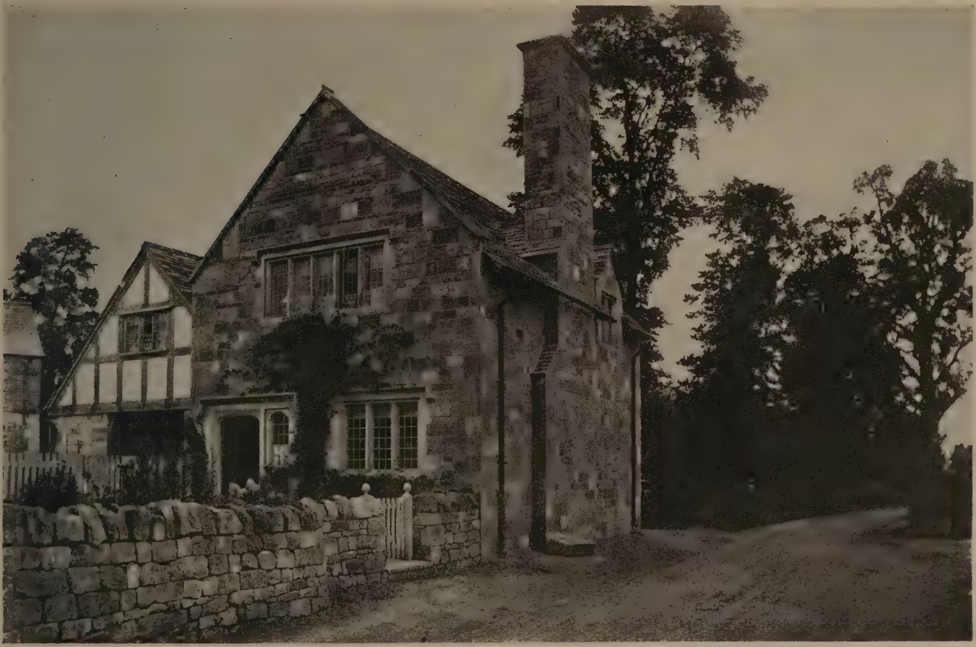
In the East and in the Central States the architects are just as active and sincere in trying to fuse old methods and new motives, and with just as much inventiveness and striving toward a common goal of architectural independence. But they have not quite so vibrant a background, nor do they enjoy so complete a degree of isolation as their Western brethren, and consequently we do not find so much unity among them. There is more of the seeking of designers to impress their personal manner upon their work, giving rise to such individual expressions as those we associate with the names of Harrie T. Lindeberg and Wilson Eyre.

In the East, more often than in the Far West, we find the orthodox architects—the "fundamentalists" who seldom break faith with the gospel of tradition, and whose creed is that architecture is a continuous process that must be continuously developed. They are not always slaves of "style," and their work is often spontaneous enough, but they would not cross the Georgian with the Jacobean strain, nor would they take liberties with the Colonial. Their reverence for the past, one sometimes suspects, makes them forget that the architects of the past were as human as the rest of us, and did not arrive at absolute perfection.

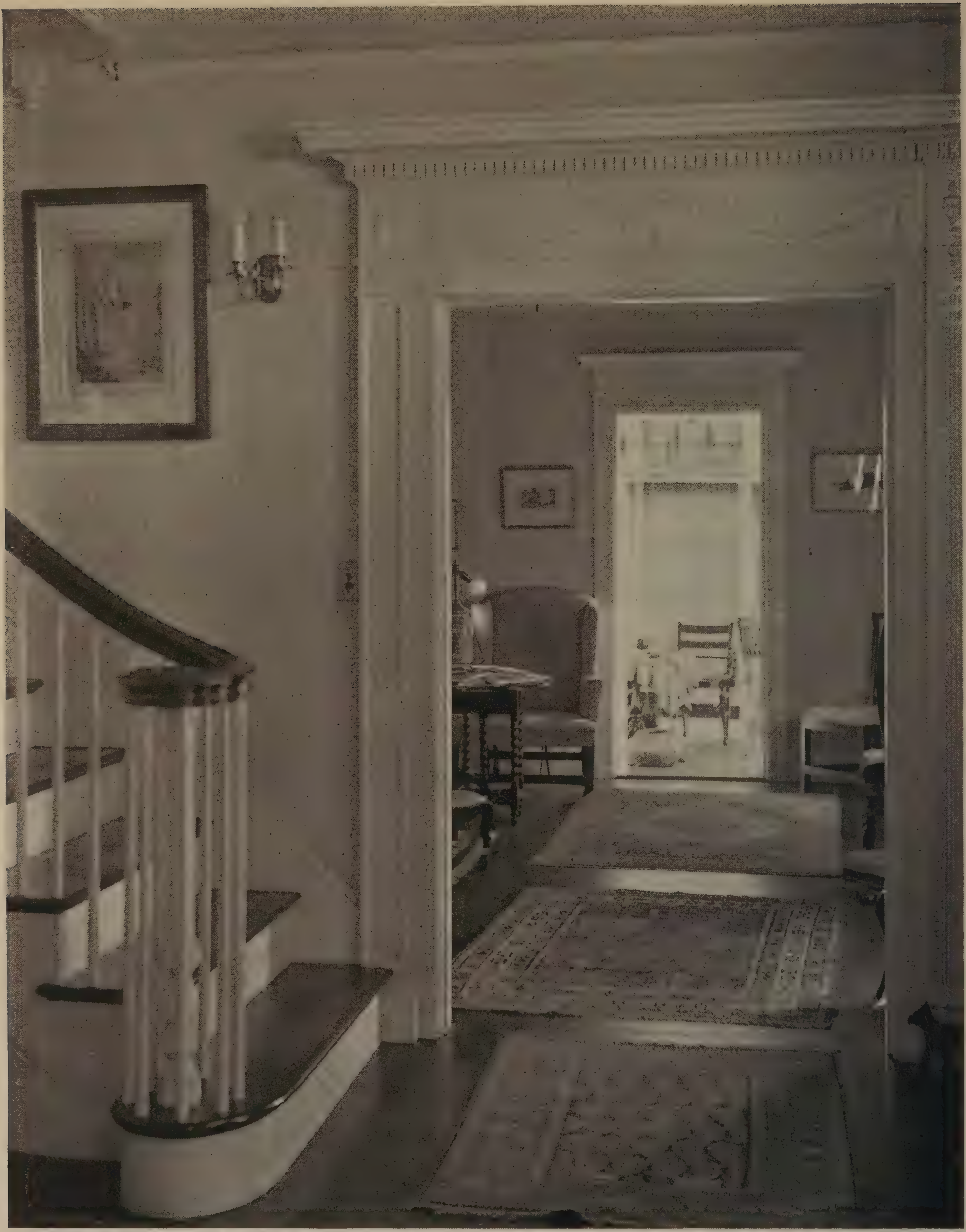
But the East also has architects to whom "style" is a minor consideration, and who either mingle styles as they like to suit their purposes, or cut loose from precedent altogether. Like the country house architects of California, men of this school have delighted to experiment with the varying problems created by the site, materials, and individual requirements in suburban architecture. They are more at home with the modern country house than are the conservatives, for its necessary informality and geniality plays into their hands. Their type of house is what is commonly known as the "Picturesque," and can be traced, if it has a parentage, most commonly to the homes built in England and France before the Renaissance. Many of them reveal a thorough knowledge of the spirit of the old work, but they are keenly aware that their houses are modern



THE COTSWOLD TRADITION



AN ENGLISH ADAPTATION OF THE COTSWOLD TRADITION
By Guy Dauber, Architect



HOUSE FOR MRS. GEORGE LEE, NEW LONDON, CONN.
Allen W. Jackson, Architect

houses for modern families. And it cannot be too often insisted that a house is really a kind of garment which must adapt itself to the personality and habits of the wearer.

In the work of Mellor, Meigs and Howe there is almost always the reflection of unlimited selection, colored with a vein of poetic invention. This is admirably illustrated in the McManus house at Germantown (Pages 413-415). The residence for Vincent Astor by Delano and Aldrich (Pages 422-424) is equally free from stilted reminiscence. Possibly its roofs and the walls, with their whitewashed effects, are early American, and its window patterns are distinctly English. But the real fascination of such houses as this springs from their frank originality and their restrained simplicity. One finds the same qualities in the country seat of Reginald Fincke, Esq., at Southampton, Long Island (Pages 434-438).

The Colonial style, as is natural, appeals more to the academics than to the independents. In dealing with it, tradition has usually been closely followed. Several of the houses illustrated in this issue were derived with little modification from single prototypes, or by a combination of features copied with almost literal exactness.

Even more often it is in such isolated elements as doorways, cornices and mantels that we can detect an active application of early motives and formulas. The American wing of the Metropolitan Museum has already exercised a potent influence, particularly in the matter of interior woodwork and decoration. It has for the first time really popularized "Early American" in the minds of the public, it has appealed to our patriotic instinct, and it has left with us a conviction of the enduring beauty and the fresh possibilities inherent in our early craftsmanship.

This might seem a victory for the traditionalists. It has long been considered, so to speak, that though the Colonial house might break it would not bend. Its inherent formality, it was contended, was fixed, and could not be adapted to the complex requirements of a house, let us say, on an irregular hillside and in the country. Yet this has presented no particular difficulty to the liberals. Each year we are finding new and very successful examples as rambling in their grouping as in the cases of houses of the purely informal type. The very successful house built for the Very Rev. William Bratenahl near Gloucester, Massachusetts (Pages 480, 481) is an illustration of these possibilities.

It is quite true that many of the classic Georgian and Colonial examples are laid along fixed and rigid lines. Symmetry and absolute regularity seemed as desirable in houses to the people of the eighteenth century as they did in poetry, music and government. Yet it may not be an unpardonable heresy to say that many of the classic eighteenth century dwellings were either avowedly inconvenient or extravagant of space. This is said in the face of the common argument that the square or box form is the most economical. The rooms in such houses two centuries ago were perfectly balanced without a corresponding balance in utility. They sometimes, indeed, obtained pleasing vistas, but only by a costly spaciousness. They lacked the quality of illusion. In the hands of modern romanticists the Colonial country house may take on a grace and adaptability not attained by those who invented it. Certainly the style is not dead, nor have its possibilities been exhausted.

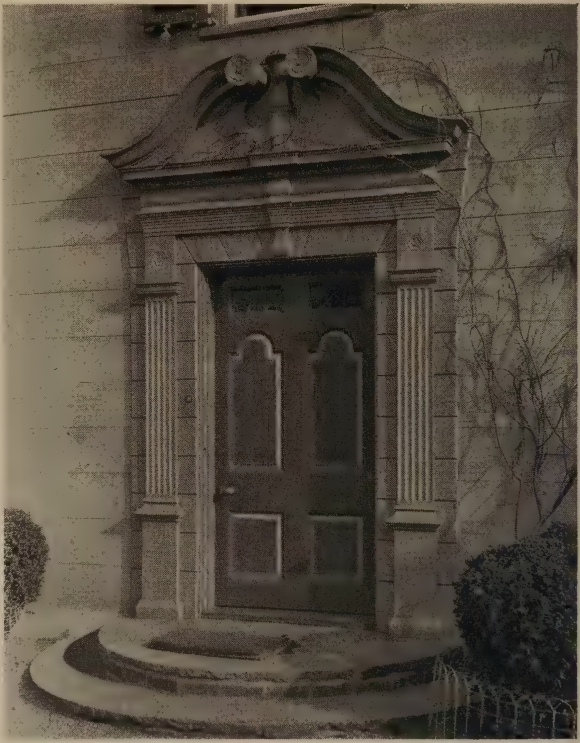
So far we have been thinking largely in terms of line. But the adventurous quality in modern country house architecture may also be found in the selection and use of materials. Materials today tend to be used for their own sake, without strict regard for historical correctness. The experimental architect frankly seeks the picturesque. Texture is featured, at times, as in the house built by Lewis Bowman for Herbert Hastings, Esq. (Pages 439, 440), in an exaggerated form. Here brick, stone and stucco are mixed. Occasionally two materials are contrasted, such as wood and brick or, as in the house of Mr. Hugh McNair Kahler by Aymar Embury, stone and stucco (Pages 453-455). All of the art of the builder's craft is drawn upon. It is as if some one had catalogued all the picturesque, all the "truly telling" effects of old and new world domestic architecture, and the architects had shopped around for whatever gave them the immediate effect they desired.

This practice is sophisticated but not insincere. It is not even new. The

Gothic builders in England valued texture and used similar expedients. They frequently patterned their walls with flint; alternated thick and thin courses of stone in masonry; introduced here and there fragments of brick—all with the same object—to give interest to the texture and indirectly to improve the color effect. Our own attitude is frankly predatory. We are like Kipling:

When Homer smote 'is bloomin' lyre,
E'd 'eard men sing by land and sea,
And what 'e thought 'e might require,
'E went and took, the same as me.

But what we take we are disposed to modify to suit our tastes, and so make it our own.



HOUSE FOR W. ALLSTON FLAGG, ESQ., WESTBURY, L. I.
Butler & Corse Architects
Inspired by Models in the Connecticut River Valley

It is of the essence of the romantic point of view in the arts that there can be no set rule, no final solution of an artistic problem. This is as true of the architect as of the painter. The elements that go into a house are as fluid, as capable of endless variation, as the colors on the artist's palette. The ability of the designer to achieve successful effects will depend upon his handling of these pigments. A house executed in concrete in a chill northern climate may strike us with nothing but its deadly monotony. Yet the same design may be full of lively interest when carried out in a native stone. Or concrete and stucco may be the ideal materials for the Southwest, with its intense contrasts of sunshine and shadow.

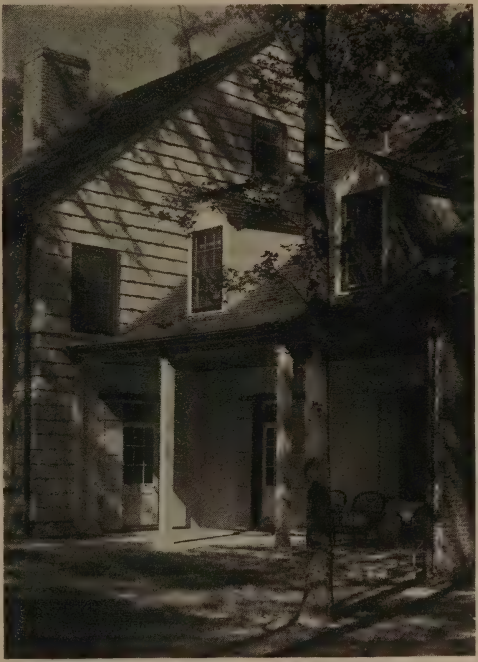
For certain types of dwellings brick will continue to claim the preference. Brick fits well with the Georgian tradition and with certain examples of the Colonial, and brick with cut stone trim is the rule for houses in the Tudor vein. But brick is a dialect which need not be uninteresting. We have already escaped from the dreariness of brick in the dull cranberry red shades, or brick of the same shade over an entire wall. We have learned to break, vary and soften our sober browns and Puritanic reds. Sand finishes, hand-made quality and irregular surfaces all can be used to give relief and geniality.

Lewis Bowman has obtained a pleasing originality in his house for Herbert Hastings, Esq. (Page 440), by the use of irregular dark "clinkers" with raked joints, employed in this case to "top off" a stone chimney. Brickwork can be effectively quite independent of style, as Charles R. Greco has shown in his Cleveland house (Page 426). Here the brick and cut stone trim were selected for harmonious tone relations, rather than to produce contrast. By such methods one may produce vividness or softness, according to his taste and the nature of his problem, almost as easily as though he were working in dyed textiles.

When native stone is used alone for exterior walls, the modern practice is to keep the details very simple; there are few mouldings, either at window jambs or elsewhere, and carving is entirely absent. The doorway is in nearly every case the center of interest, and the place upon which is bestowed whatever enrichment there may be. One of the most satisfactory of these dwellings is illustrated on page 396. This house was planned and built to fit the contours of the rocky site, with practically no grading. It is an excellent example of the adaptation of design to environment, and in that way serves to illustrate my general thesis.

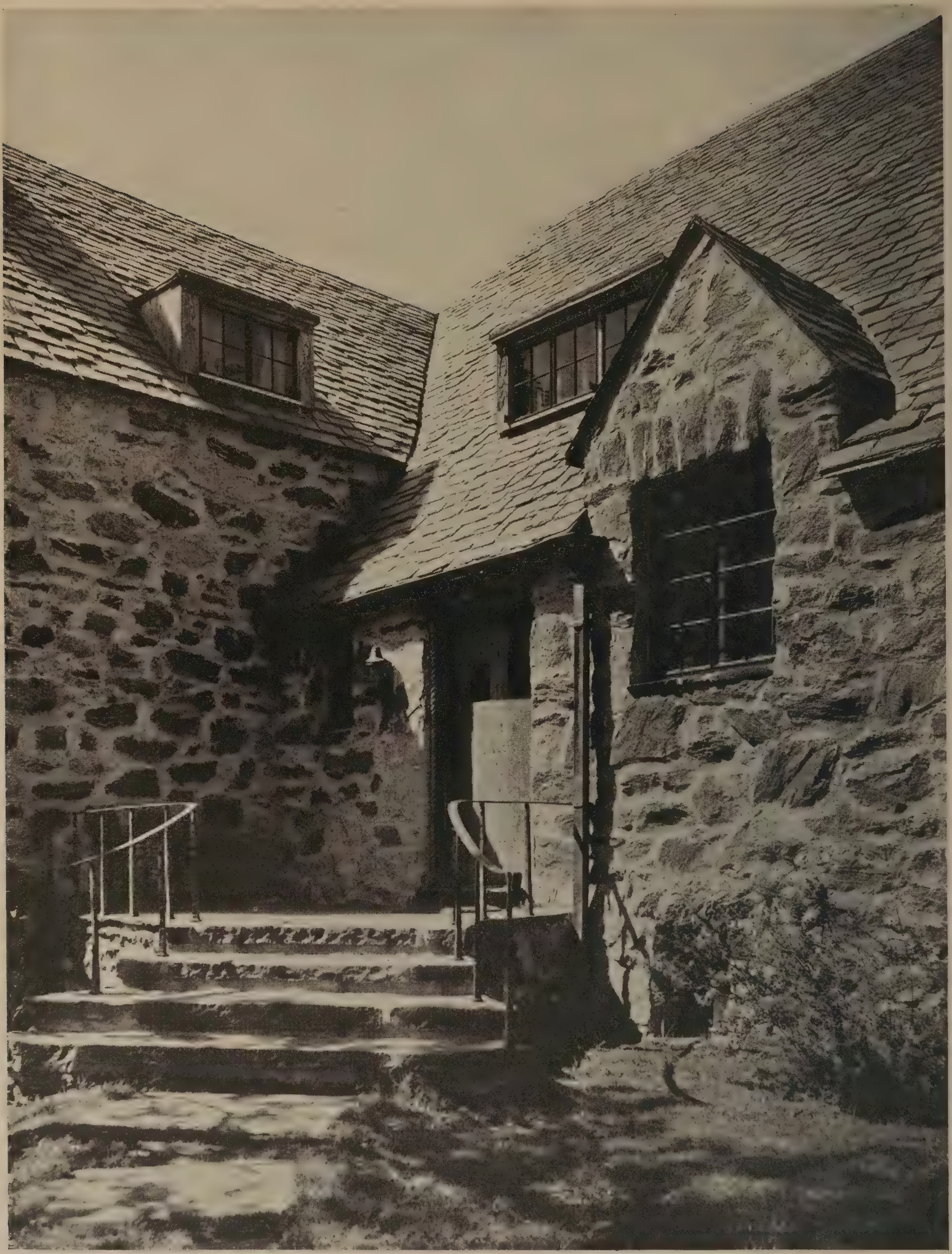
Cut stone has seen its best days, and is now very seldom employed for entire walls in domestic architecture. Its place has been usurped by rubble masonry or by other less expensive materials. Its chief remaining use is for trim in residences of Tudor characteristics.

I have tried to show, with the aid of the illustrations at my disposal, that the country house in America is more free than elsewhere from the restraint of tradition. This is perfectly in accord with our isolation, with the social and aesthetic ideals that have developed during our conquest of a new continent, and with our increasing wealth. We have both the inclination and the means for experiment. We consciously prefer modernity—that is to say, forms which we find congenial and pleasing in our own environment, and not those which have satisfied other men in other environments.



HOUSE FOR MRS. F. C. HAVEMEYER
ROSLYN, L. I.
Mott B. Schmidt, Architect
Early American Farm House Tradition

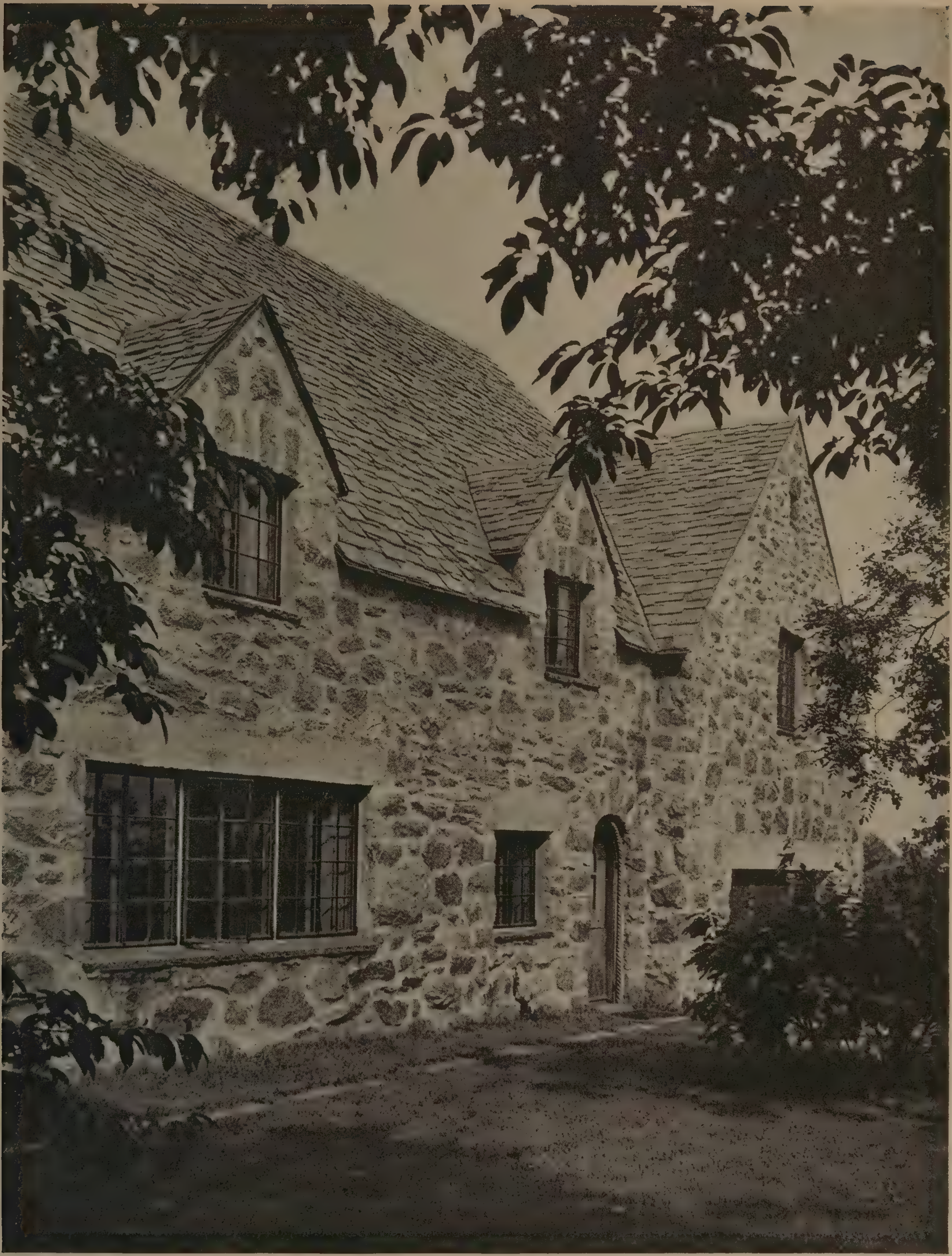
Are we any nearer a realization of the old yearning for an "American style?" Perhaps no nearer than our novelists to the "great American novel." But if such a style is to be achieved it will be, not by the general adoption of any group of historic shapes and details, but by a free selection and development of styles to meet the newer and more diverse needs of modern life. Regional differences, the variety of local materials, and above all the fundamental American characteristic of looking toward the future rather than toward the past make the outlook decidedly a hopeful one. When our ruins are unearthed, some hundreds of thousands of years hence, the archeologist may find Twentieth Century American architecture, even of the less pretentious domestic variety, as deeply and beautifully stamped with the spirit of an age as we now find the mediaeval churches of France.



Photo, S. H. Gottscho

November, 1926

RESIDENCE OF ALBERT WILSON, ESQ., MAMARONECK, N. Y.
Peabody, Wilson & Brown, Architects



Photo, S. H. Gottscho *November, 1926*

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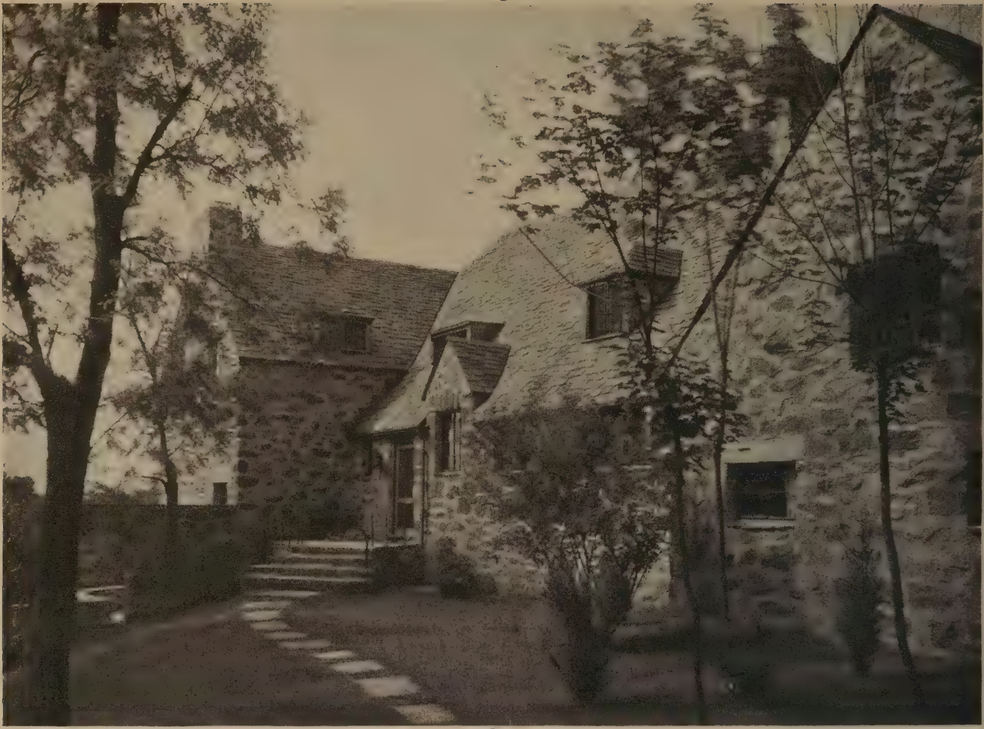

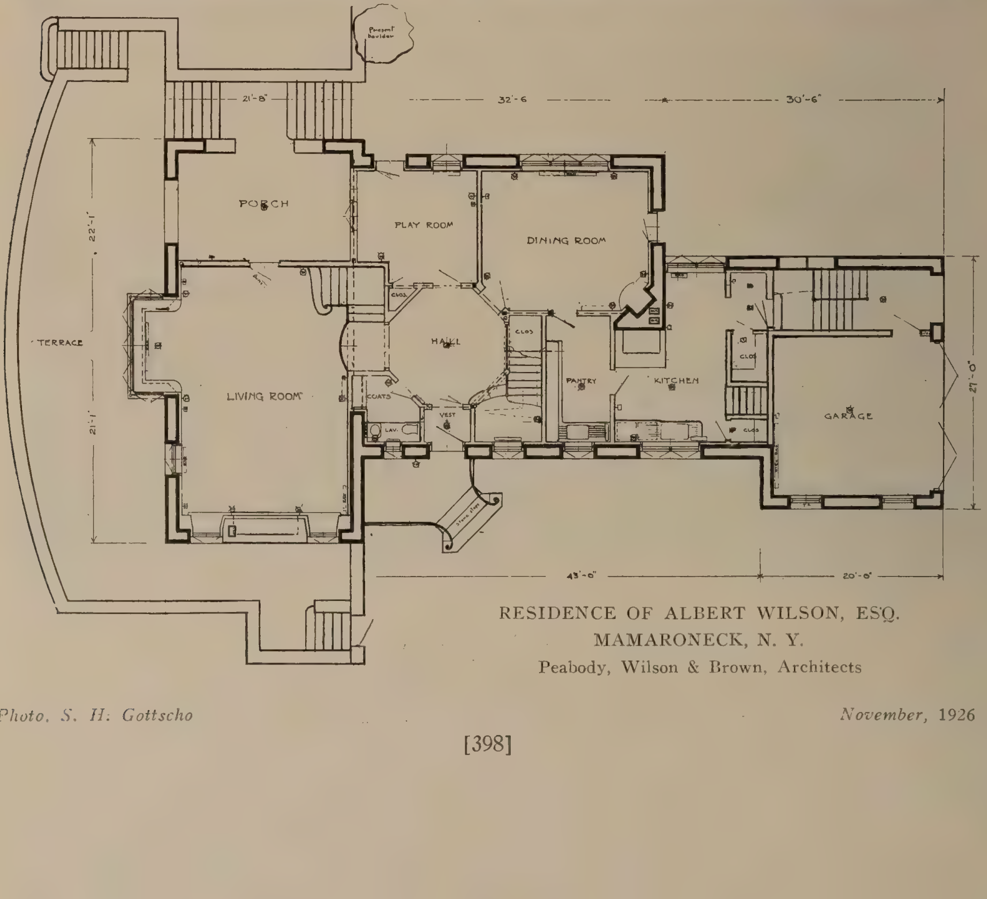

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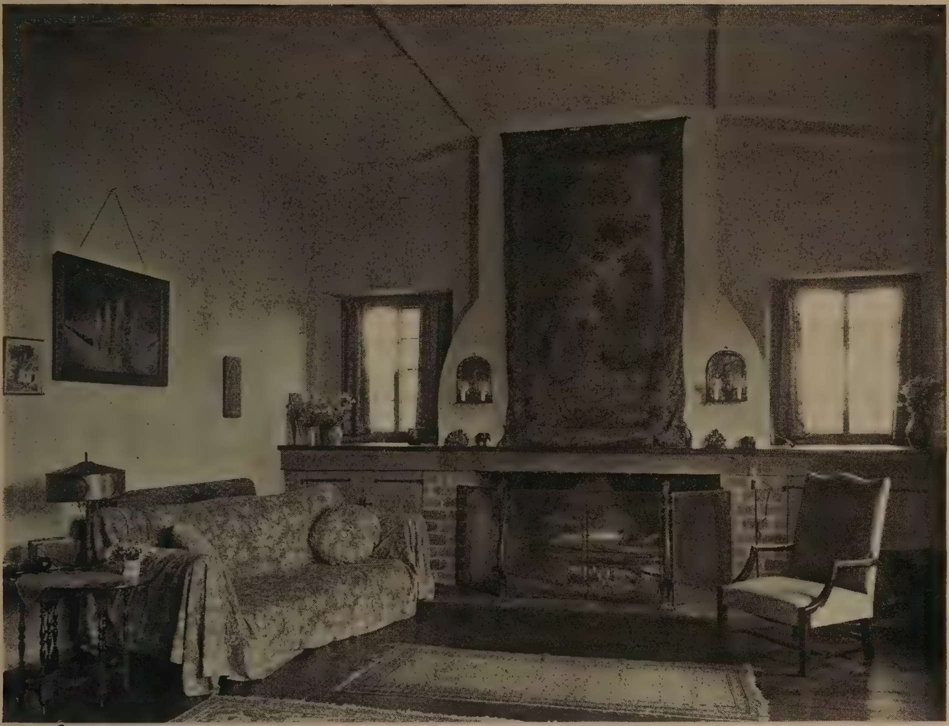

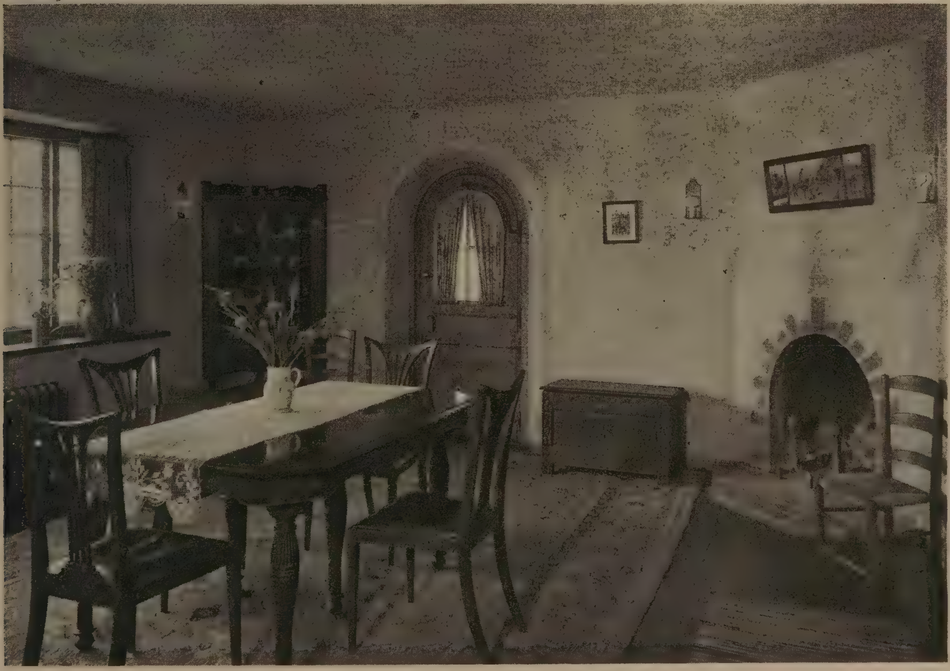

Photo, S. H. Gottscho — November, 1926

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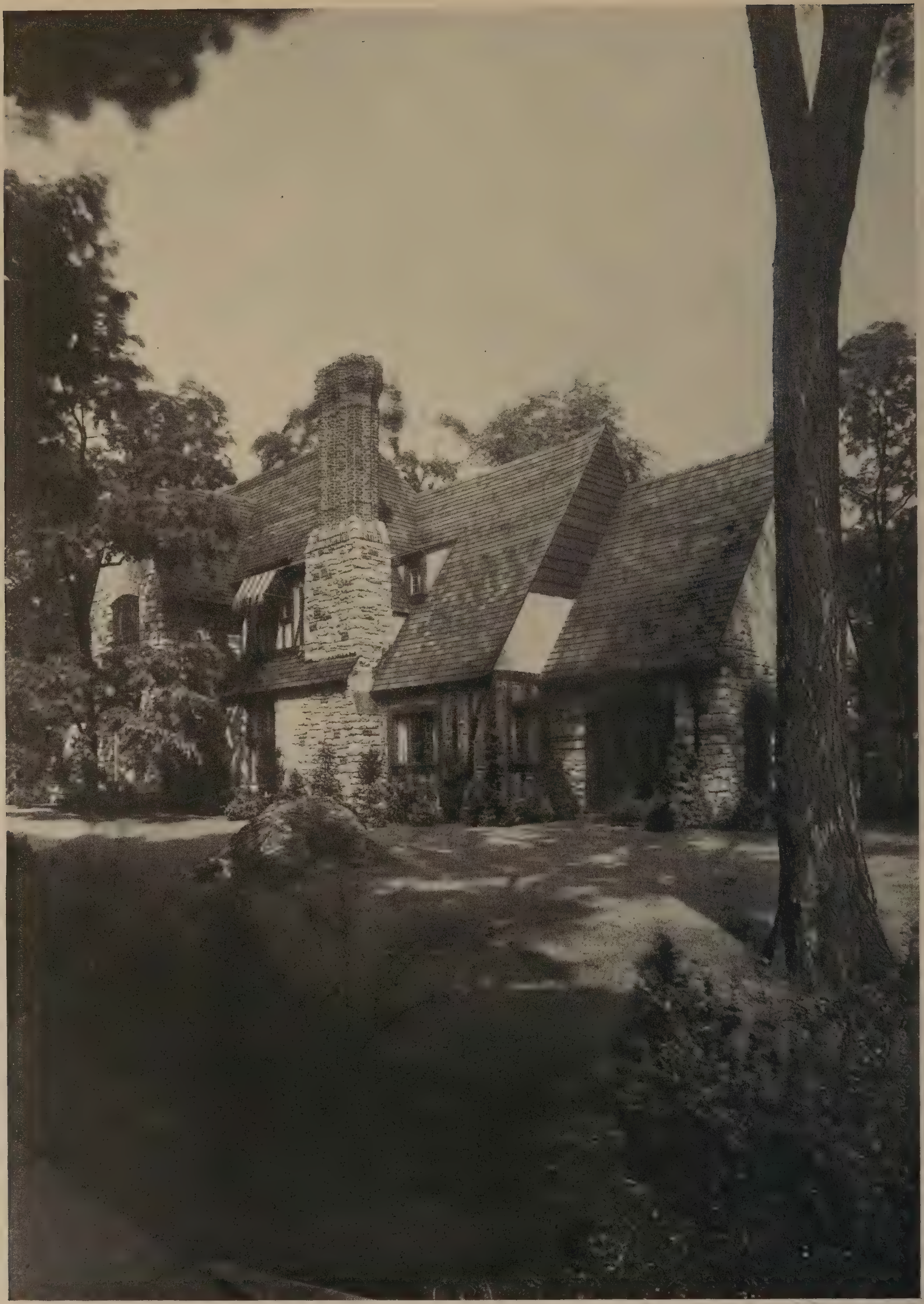
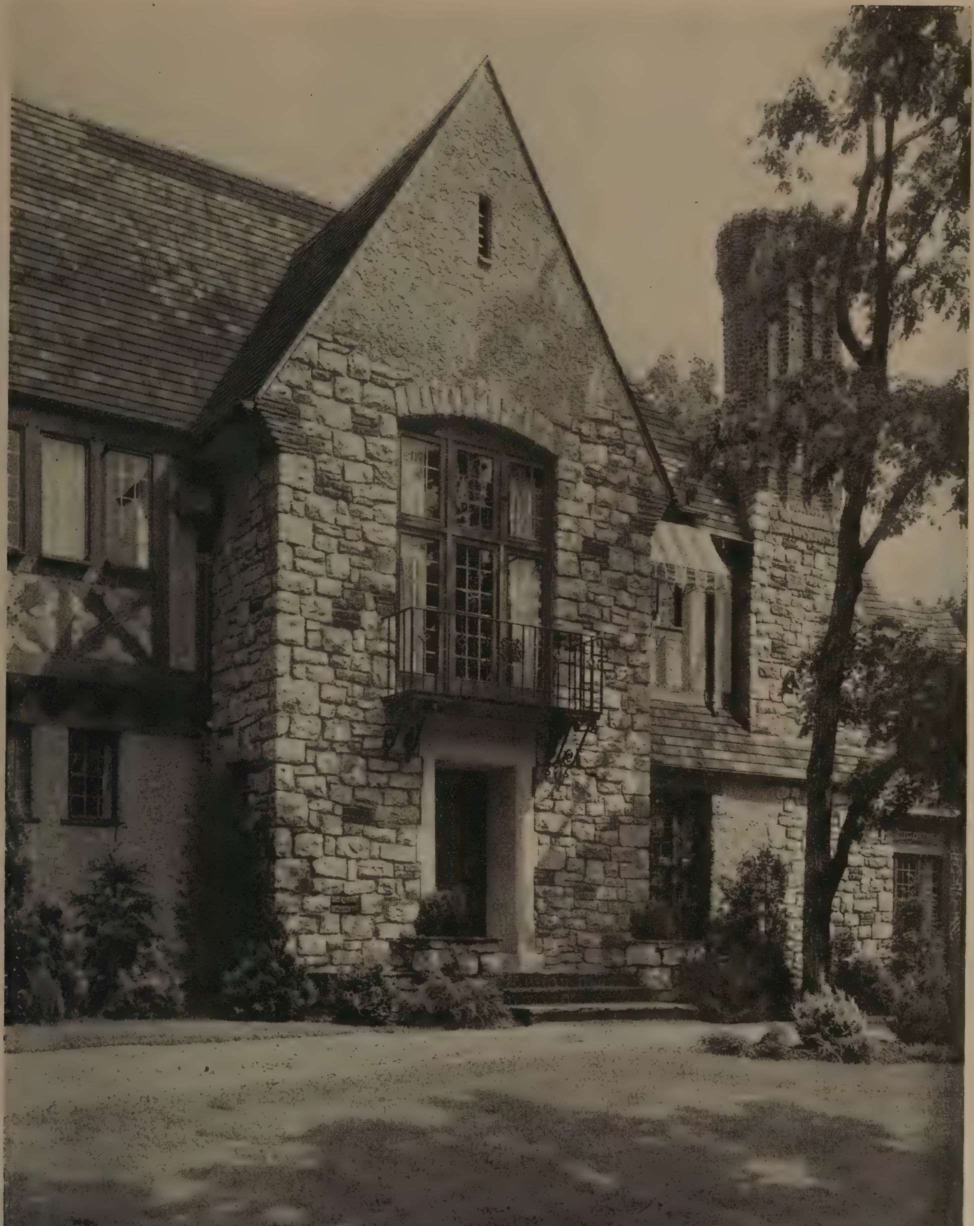
Peabody, Wilson & Brown, Architects



Photo, Gillies

November, 1926

RESIDENCE OF J. L. P. VAN METER, ESQ., PELHAM, N. Y.
F. Albert Hunt, Architect



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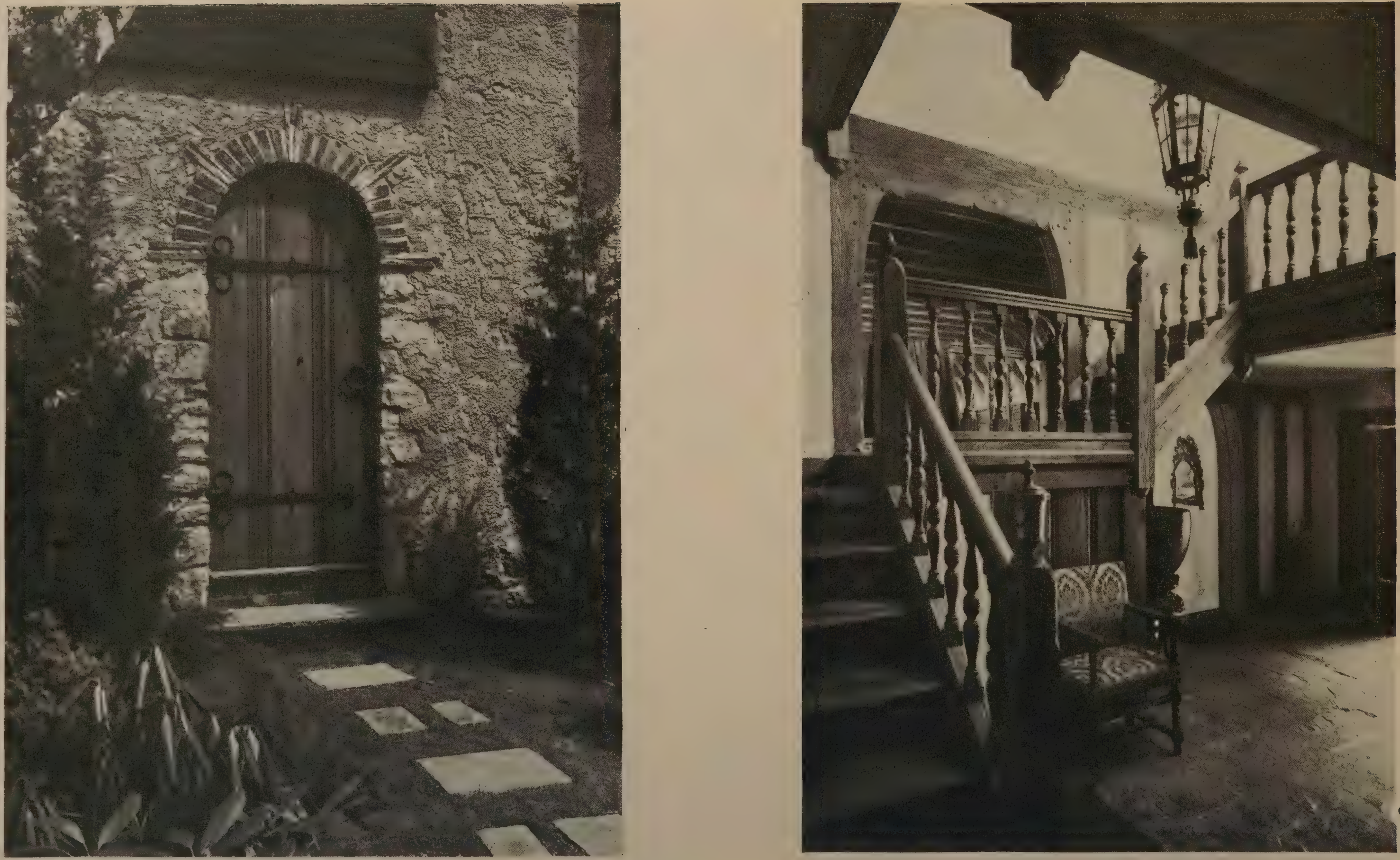

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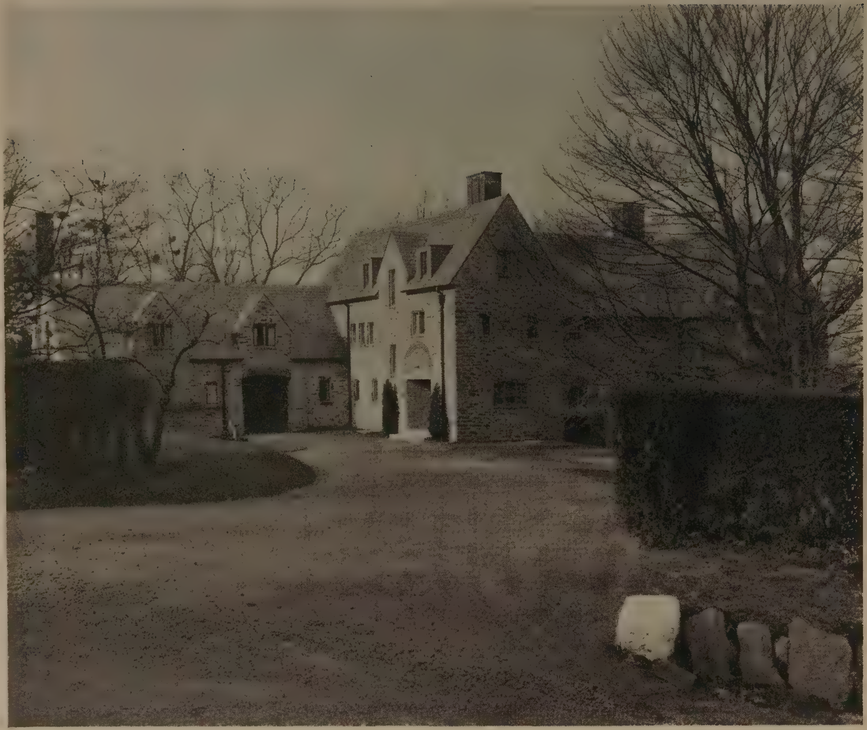
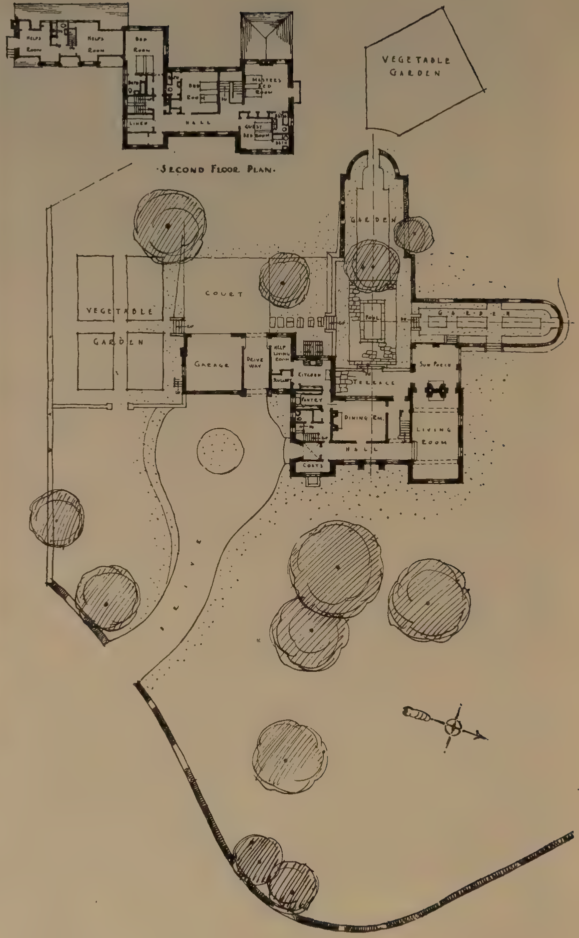
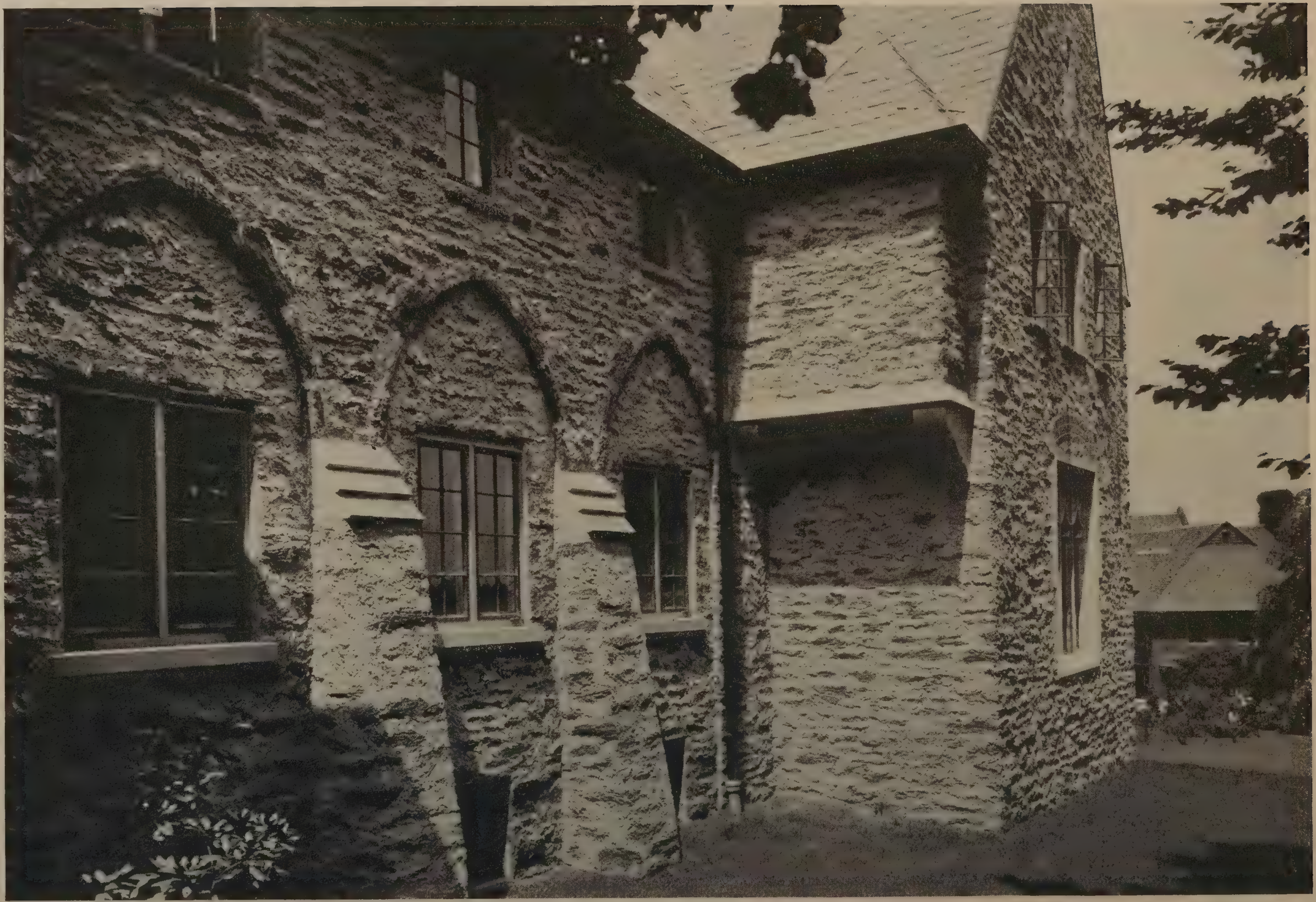




RESIDENCE OF FRANK R. WATSON, ESQ., CHESTNUT HILL, PA.
Frank R. Watson, Architect
George E. Edkins and Wm. Heyl Thompson, Associates



Photo, Philip B. Wallace

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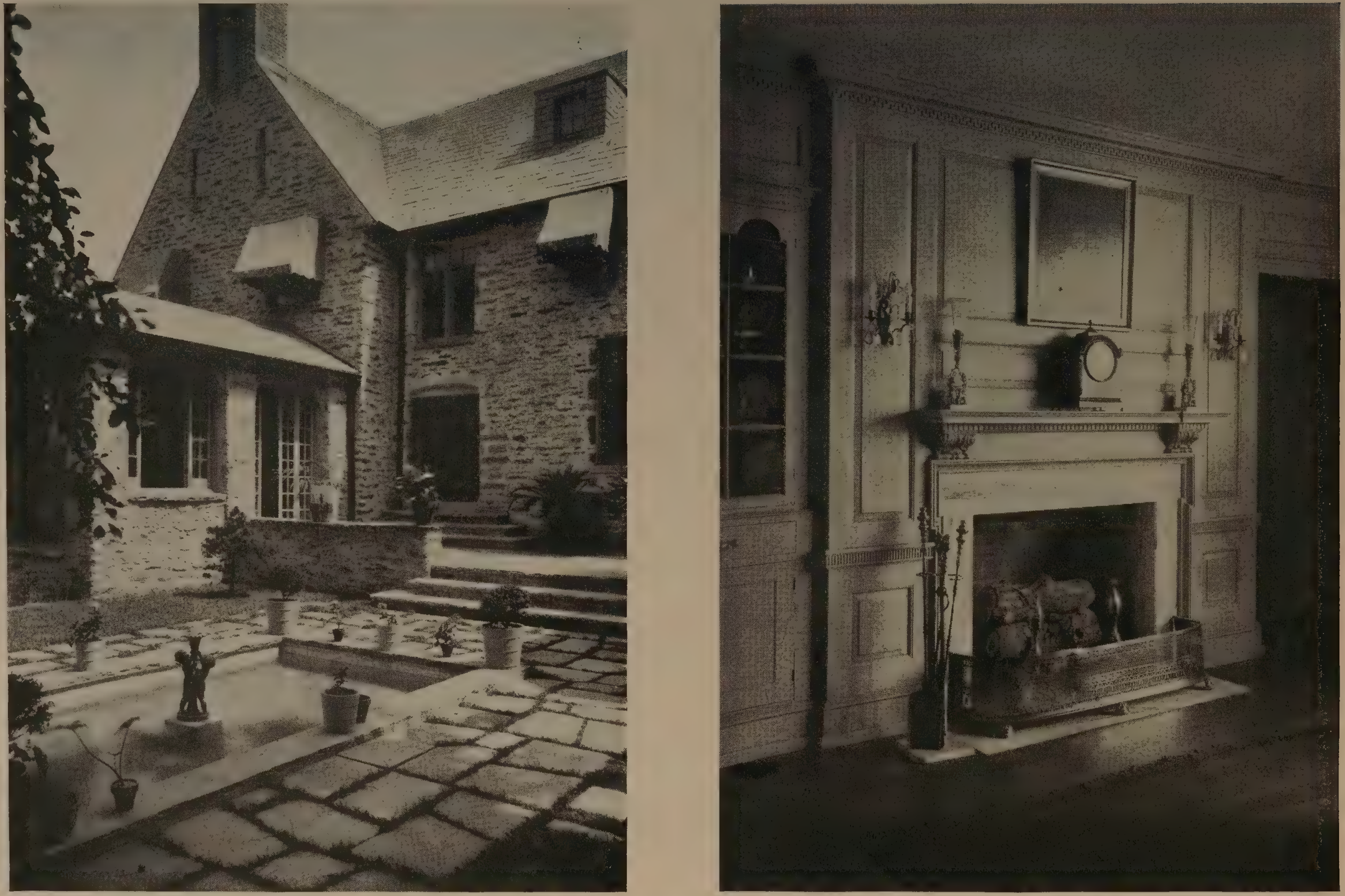

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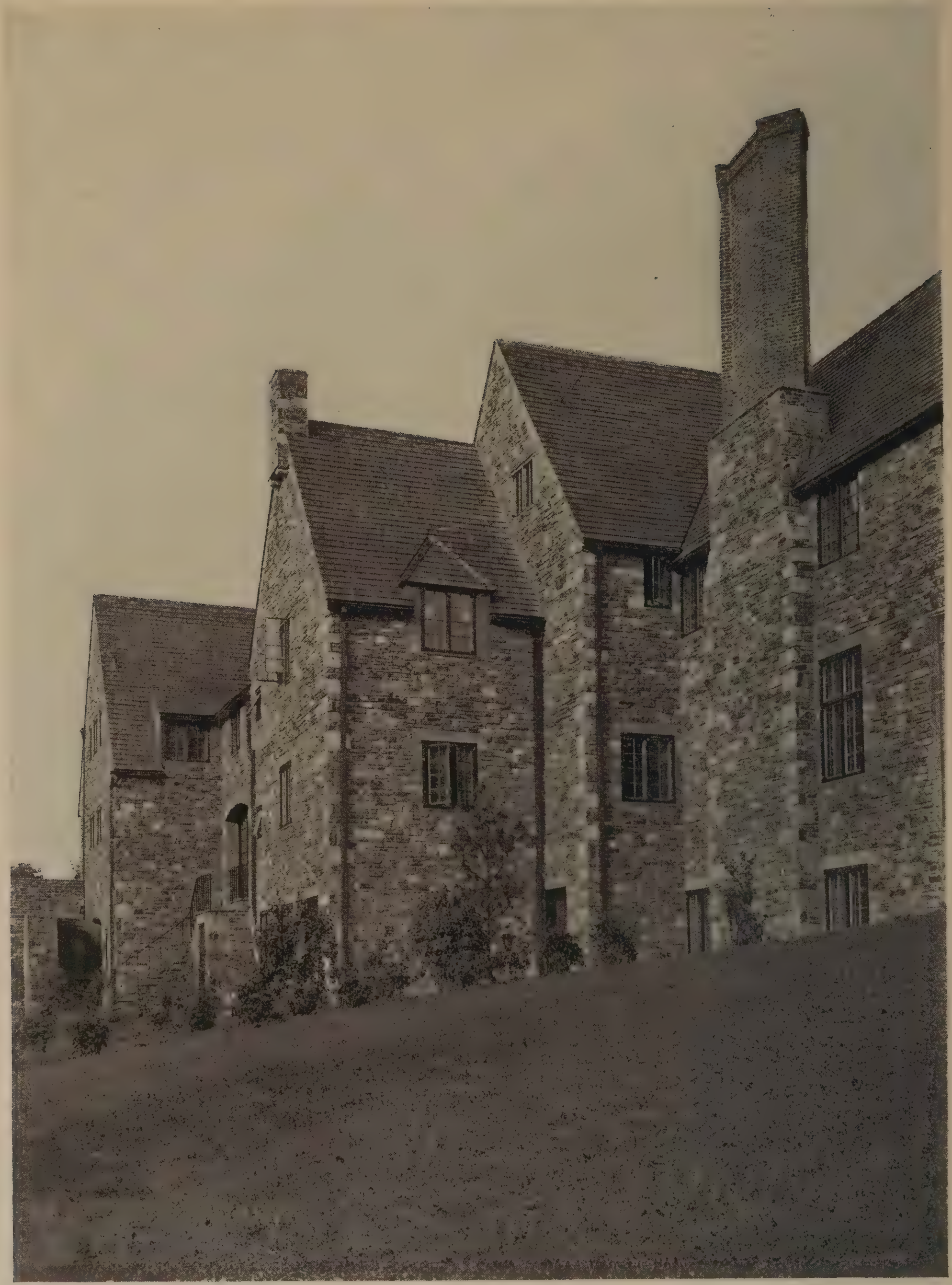
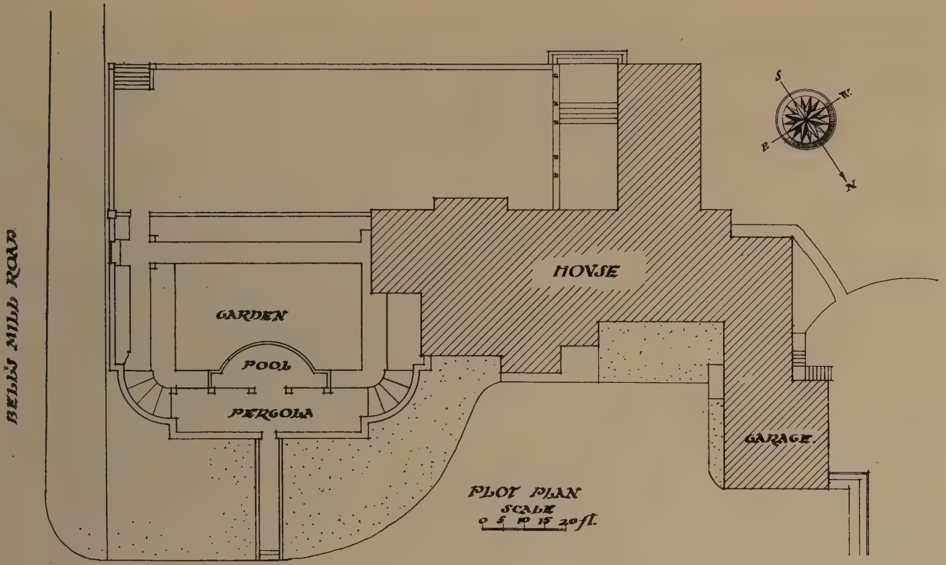
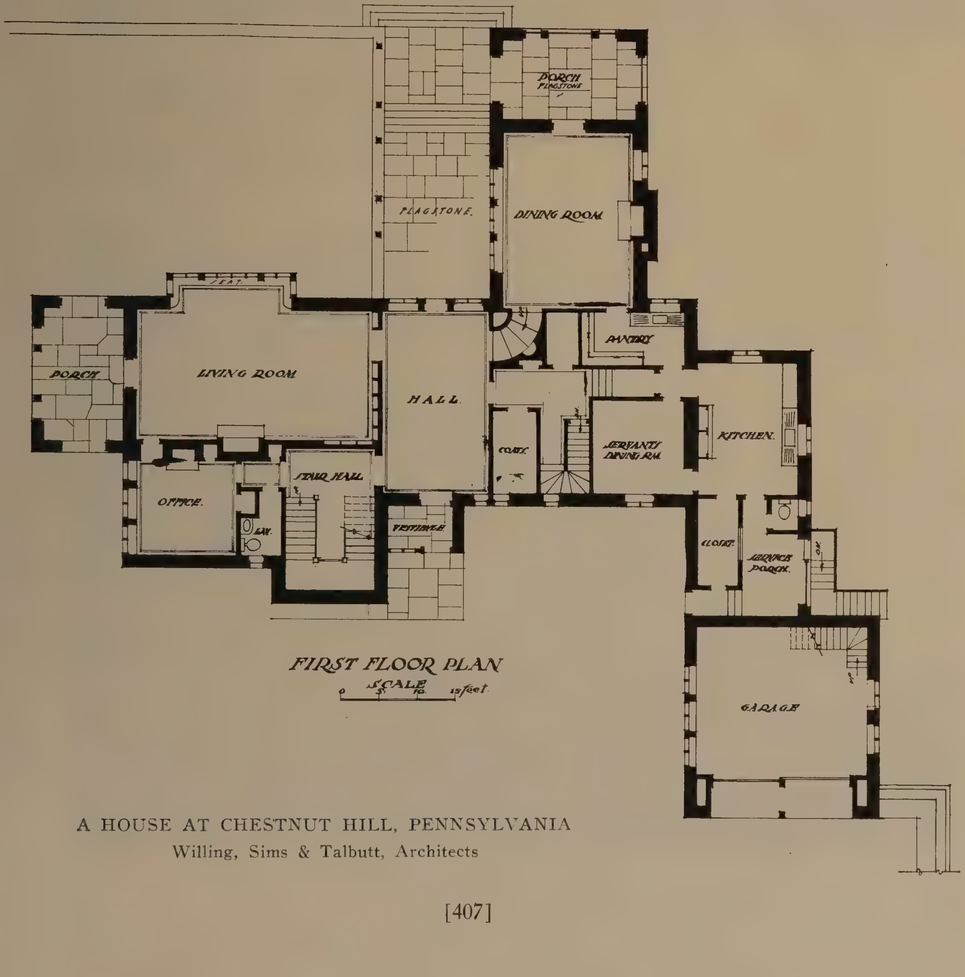


A HOUSE AT CHESTNUT HILL, PENNSYLVANIA
Willing, Sims & Talbutt, Architects





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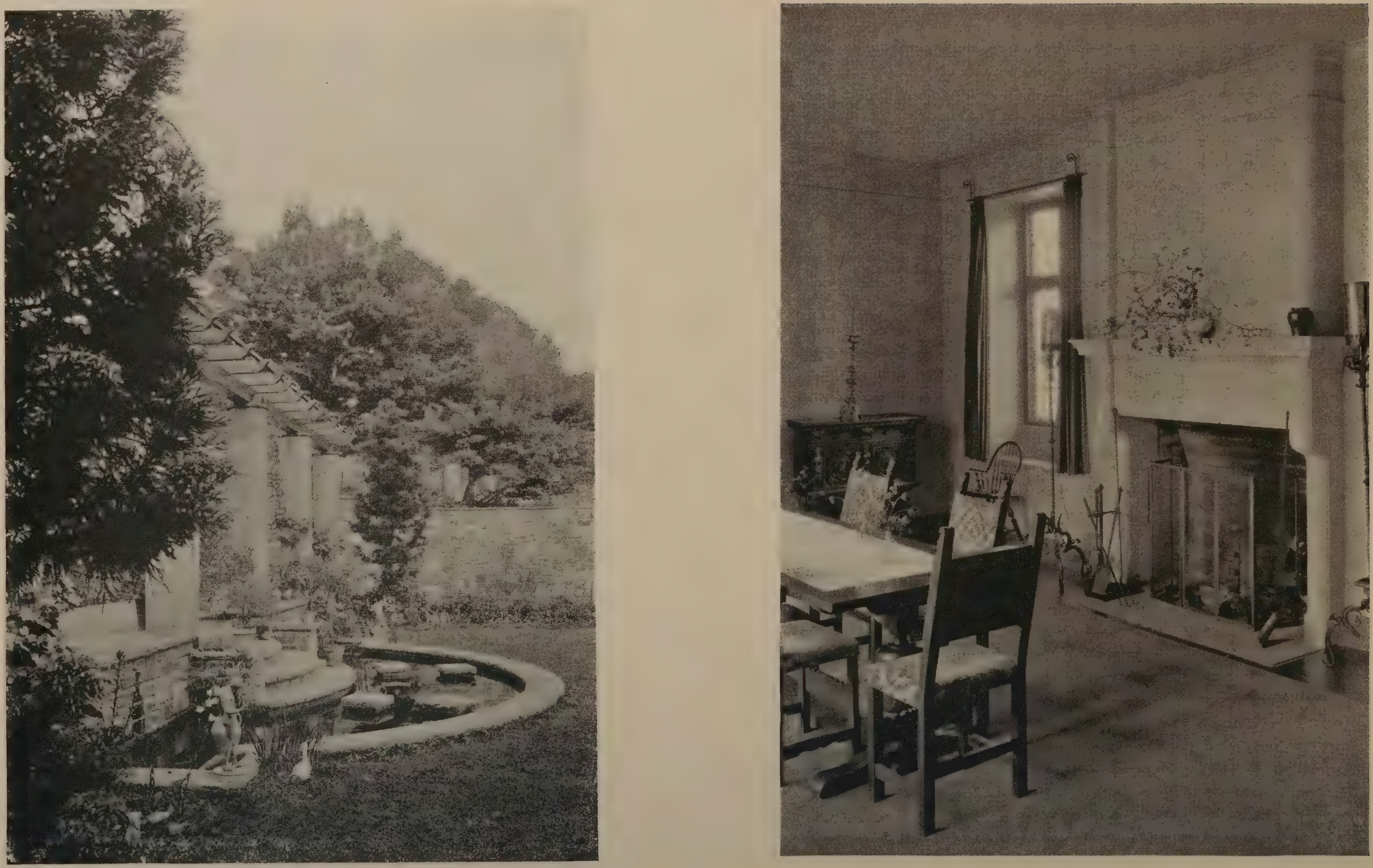

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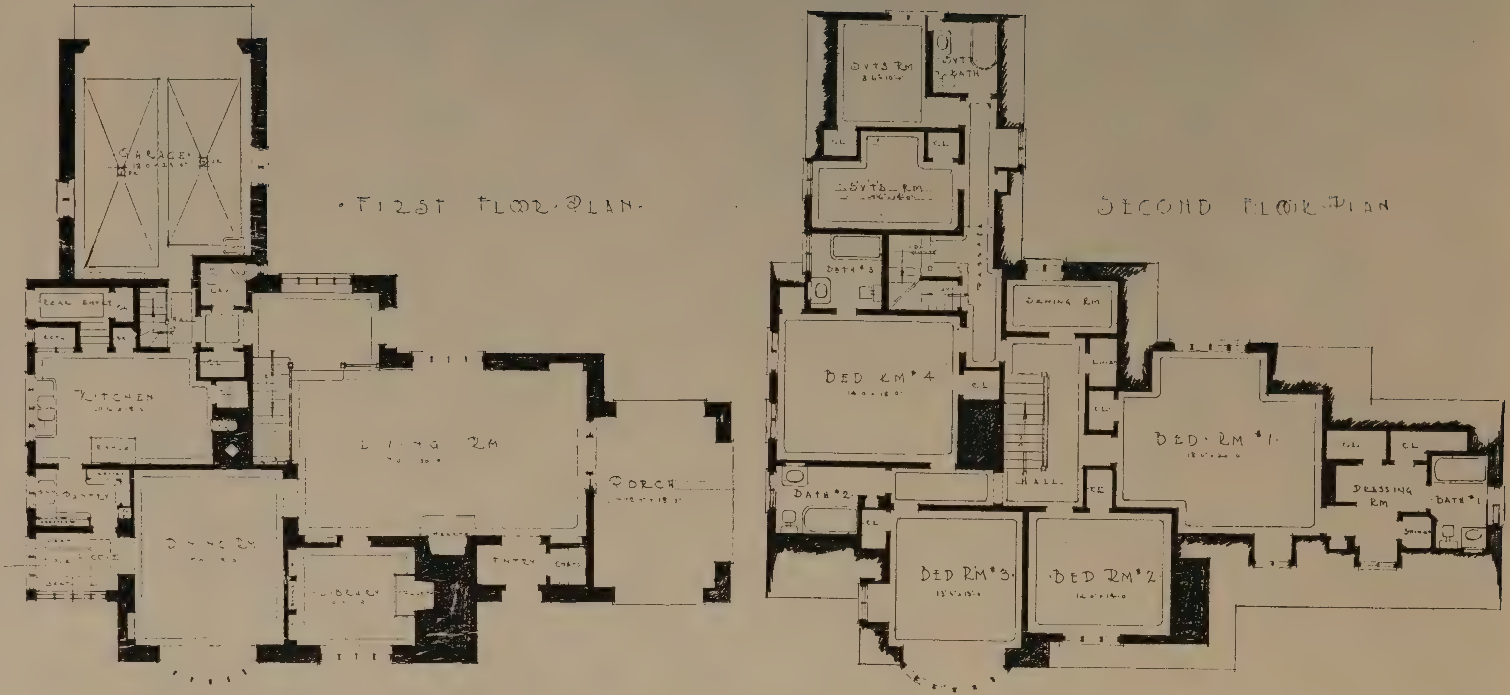
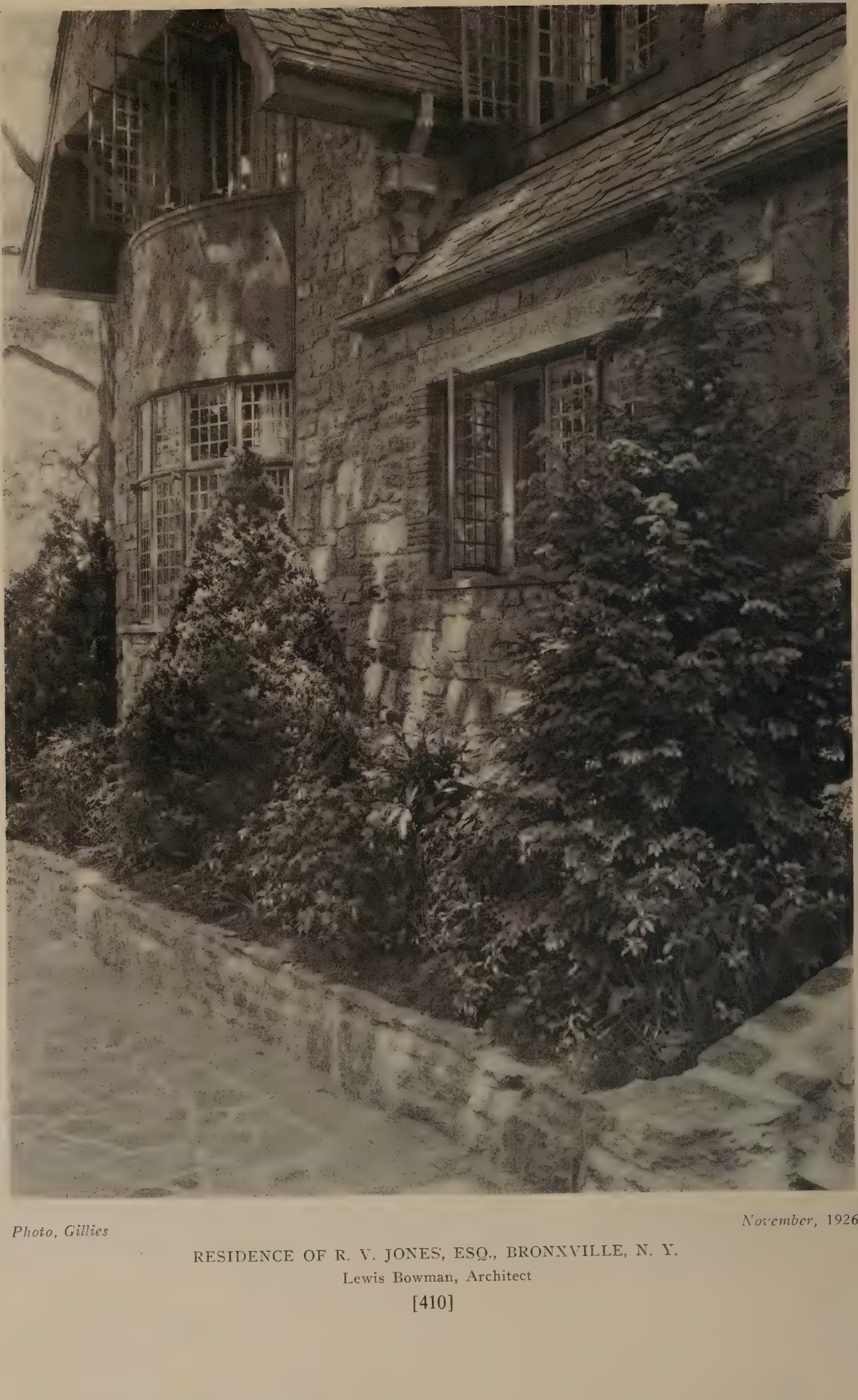


RESIDENCE OF R. V. JONES, ESQ., BRONXVILLE, N. Y.
Lewis Bowman, Architect



Photo, Gillies

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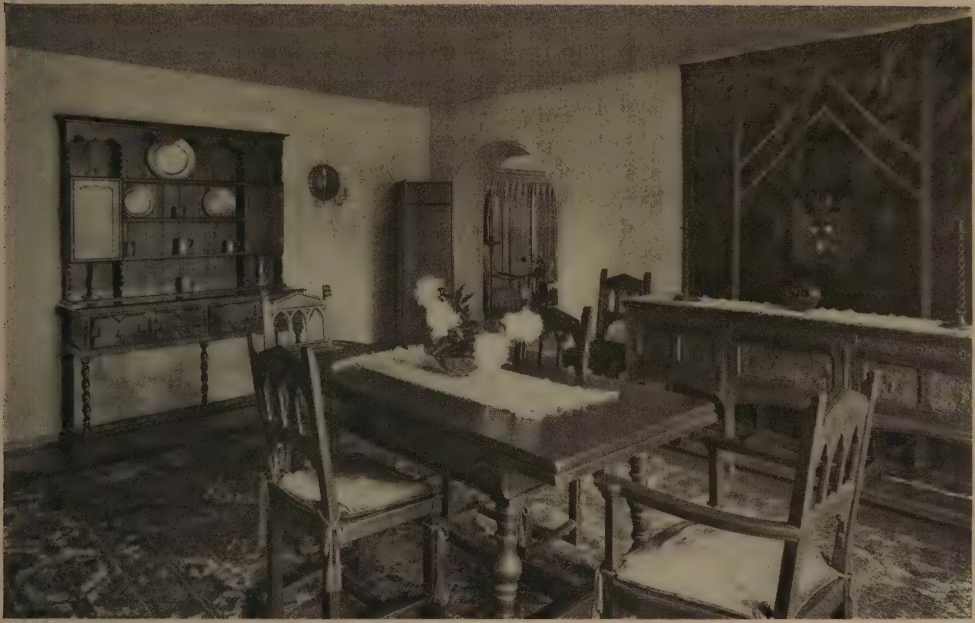

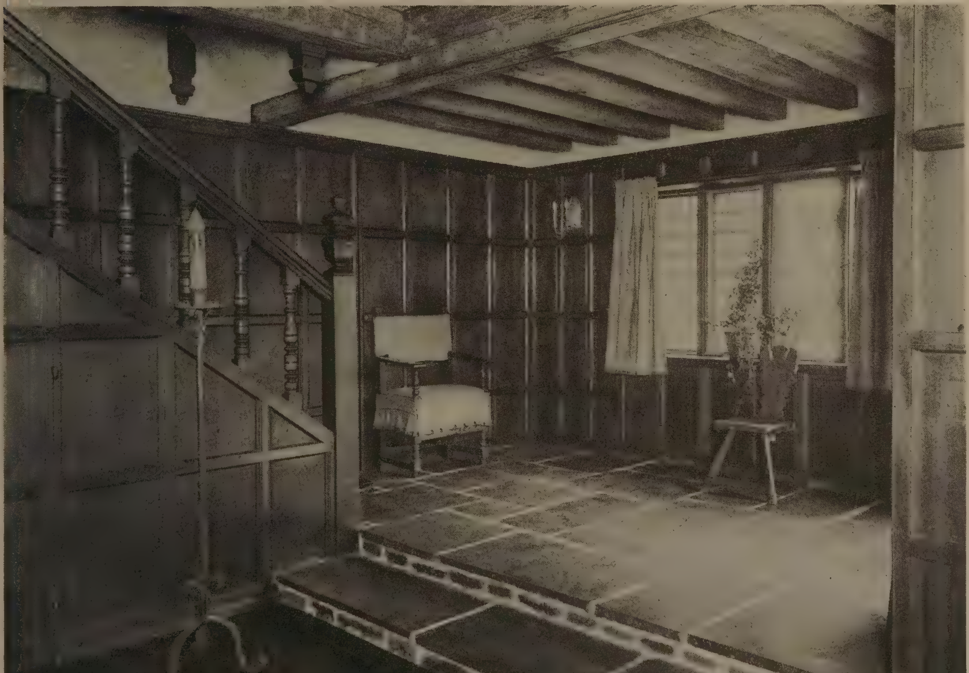

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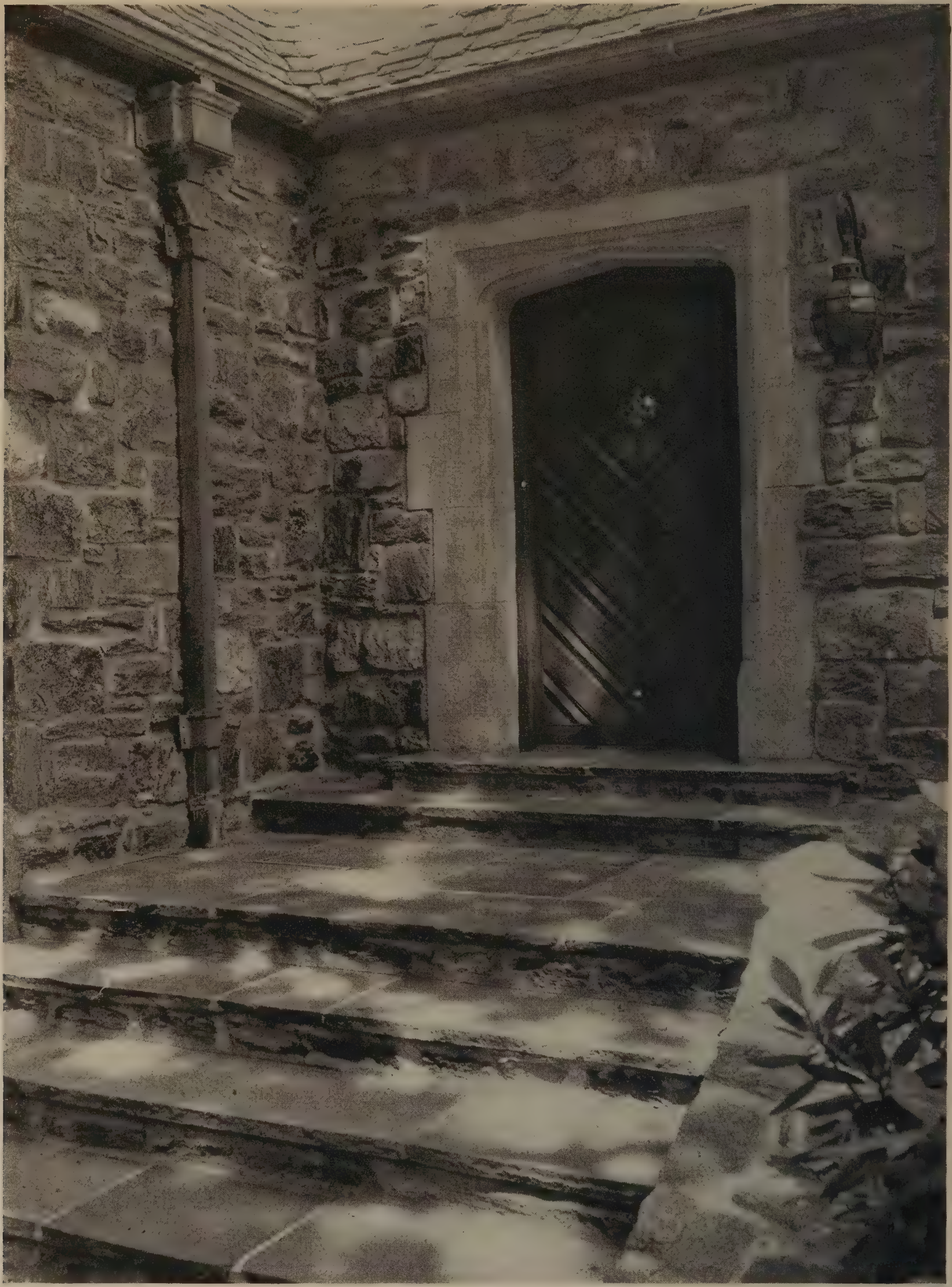

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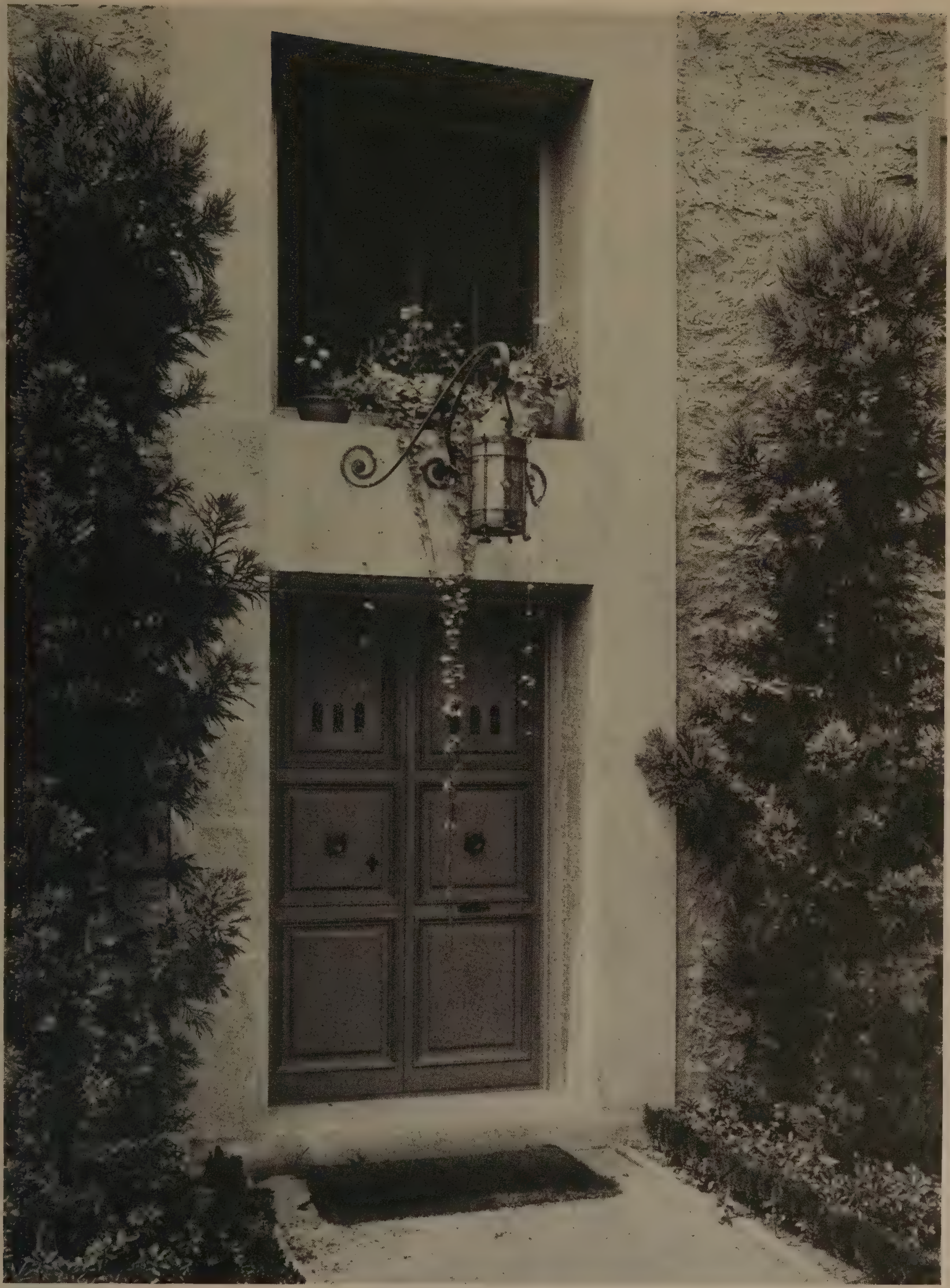
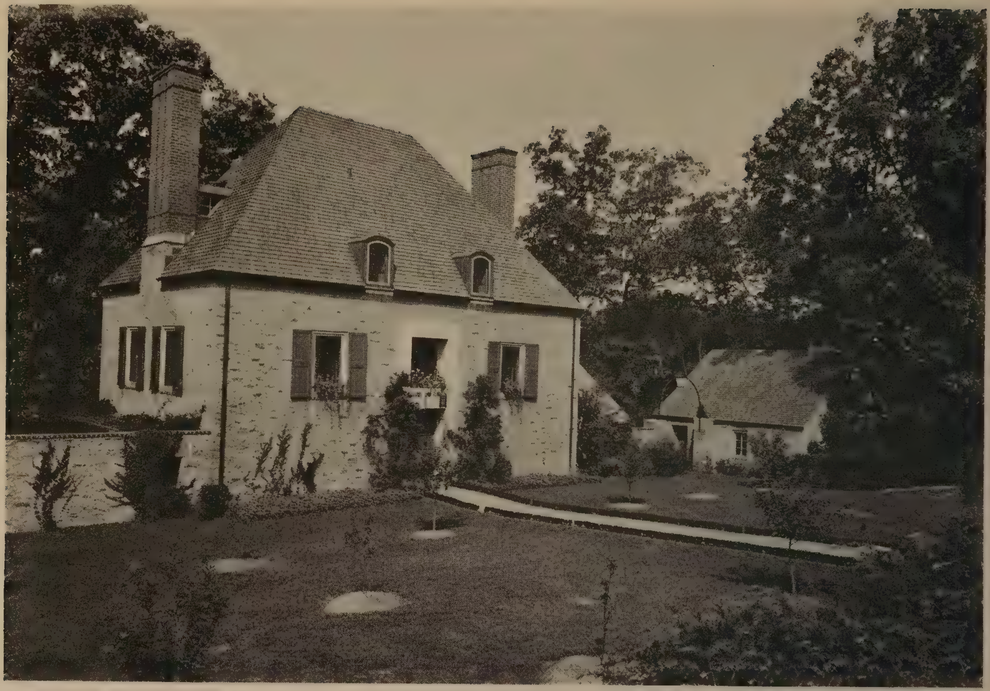
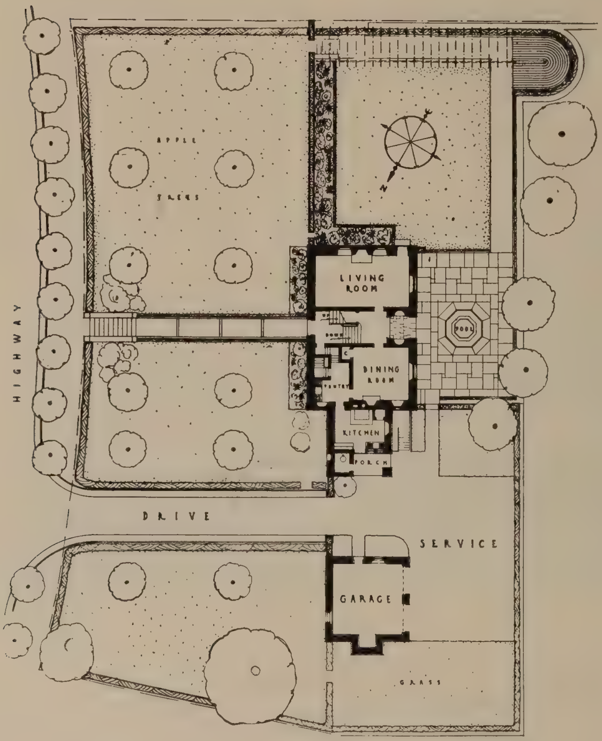
Lewis Bowman, Architect

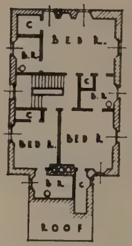


Photo, Philip B. Wallace *November,* 1926

RESIDENCE OF CHARLES J. McMANUS, ESQ., GERMANTOWN, PA.
Mellor, Meigs & Howe, Architects

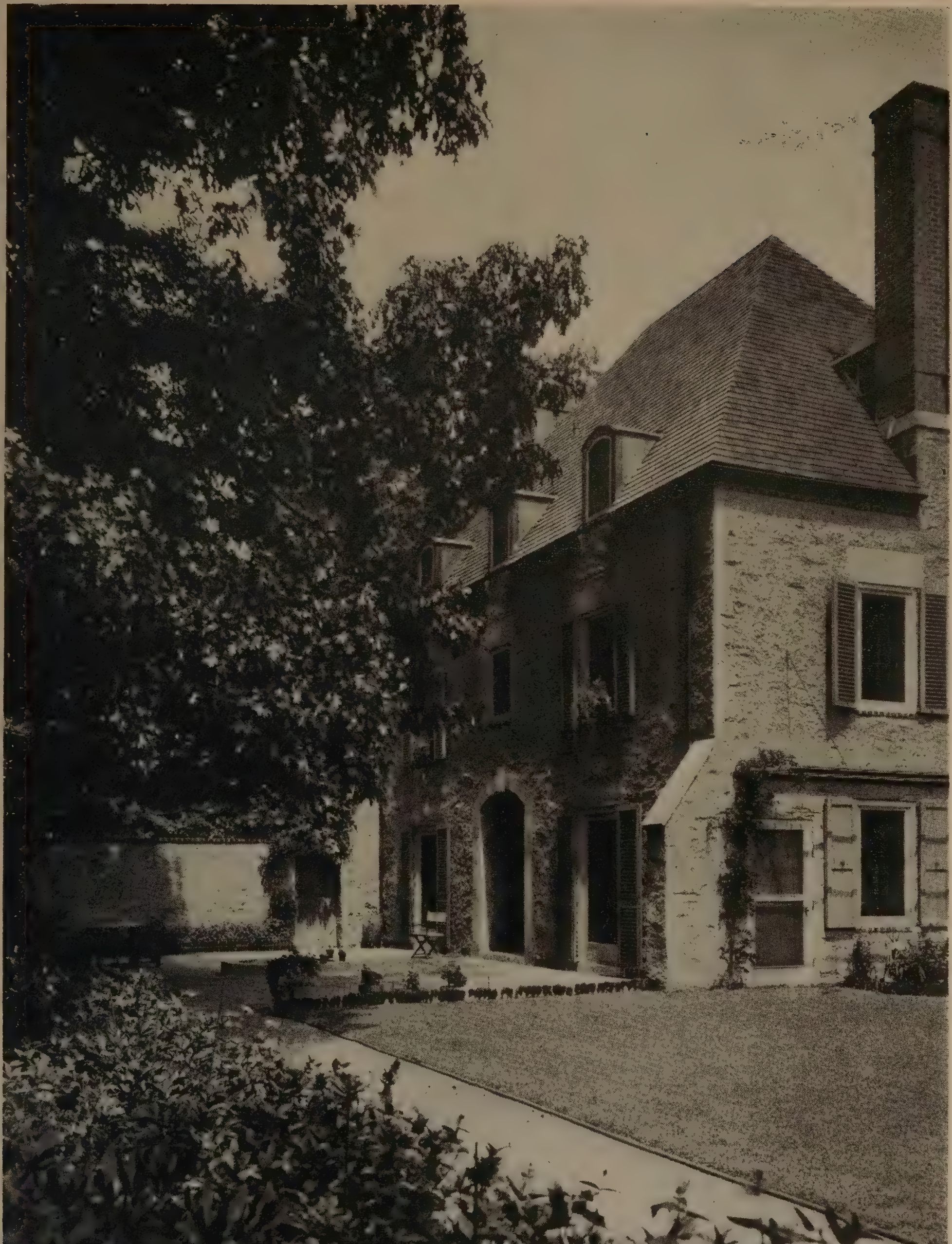






SECOND FLOOR PLAN.

RESIDENCE OF
CHARLES J. McMANUS, ESQ.
GERMANTOWN, PA.
Mellor, Meigs & Howe, Architects



Photo, Philip B. Wallace *November, 1926*

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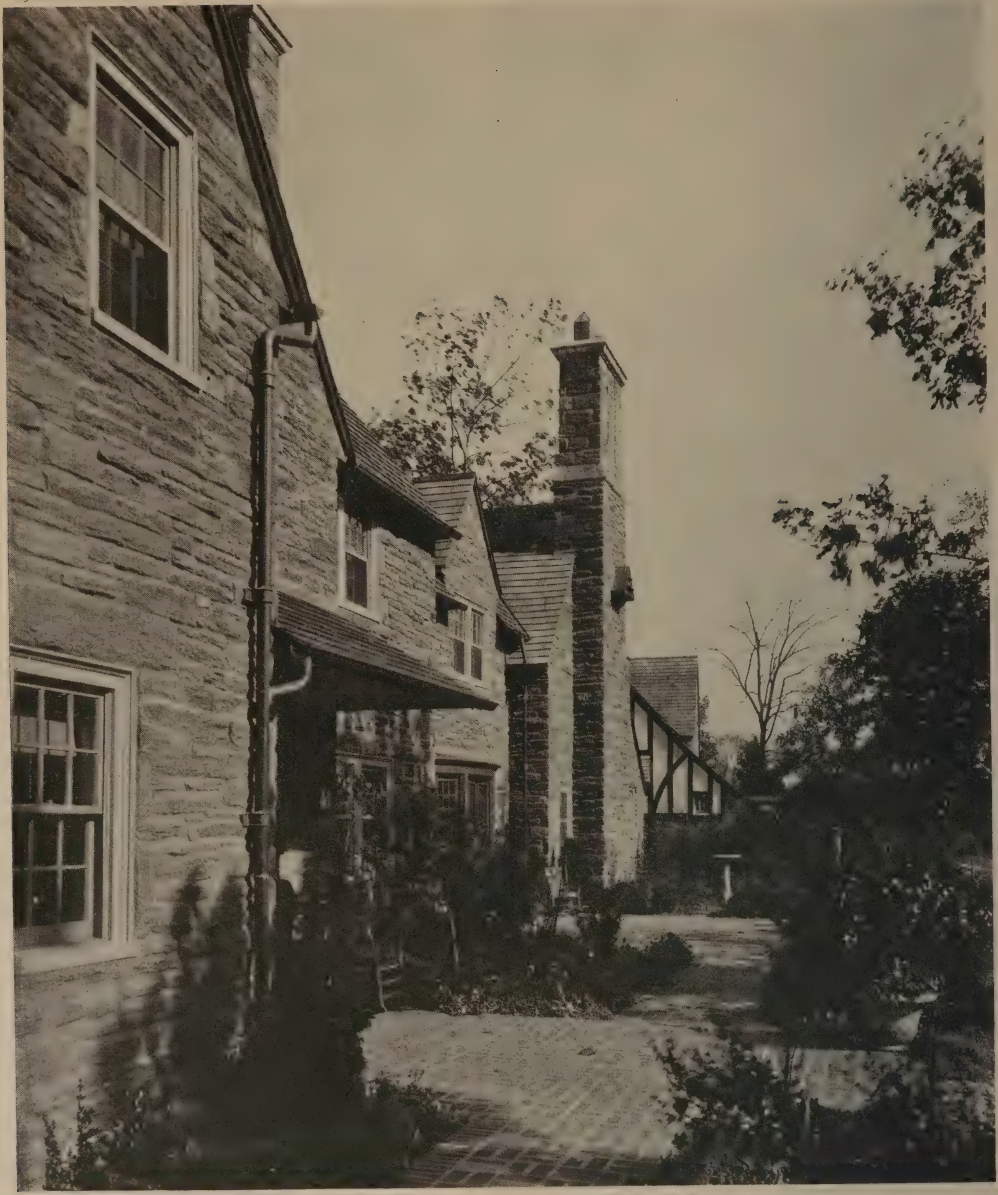
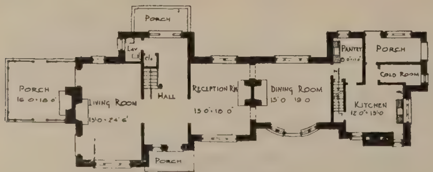
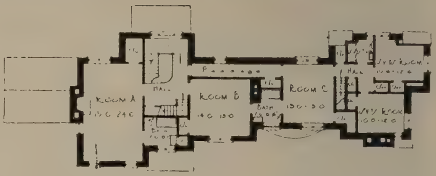
Mellor, Meigs & Howe, Architects

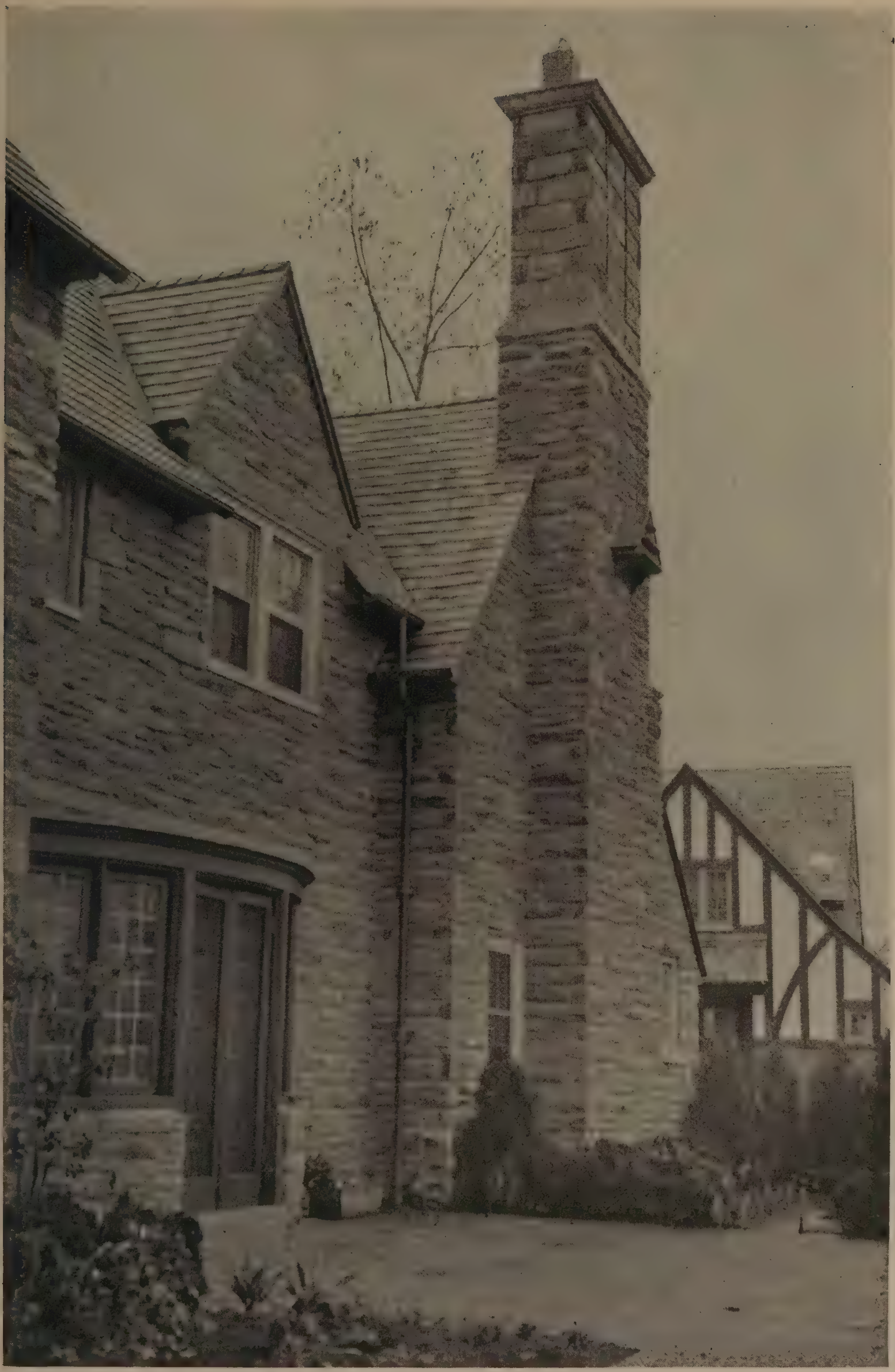






November, 1926

RESIDENCE OF C. E. DOAN, ESQ., RYDAL, PA.
Carl A. Ziegler, Architect



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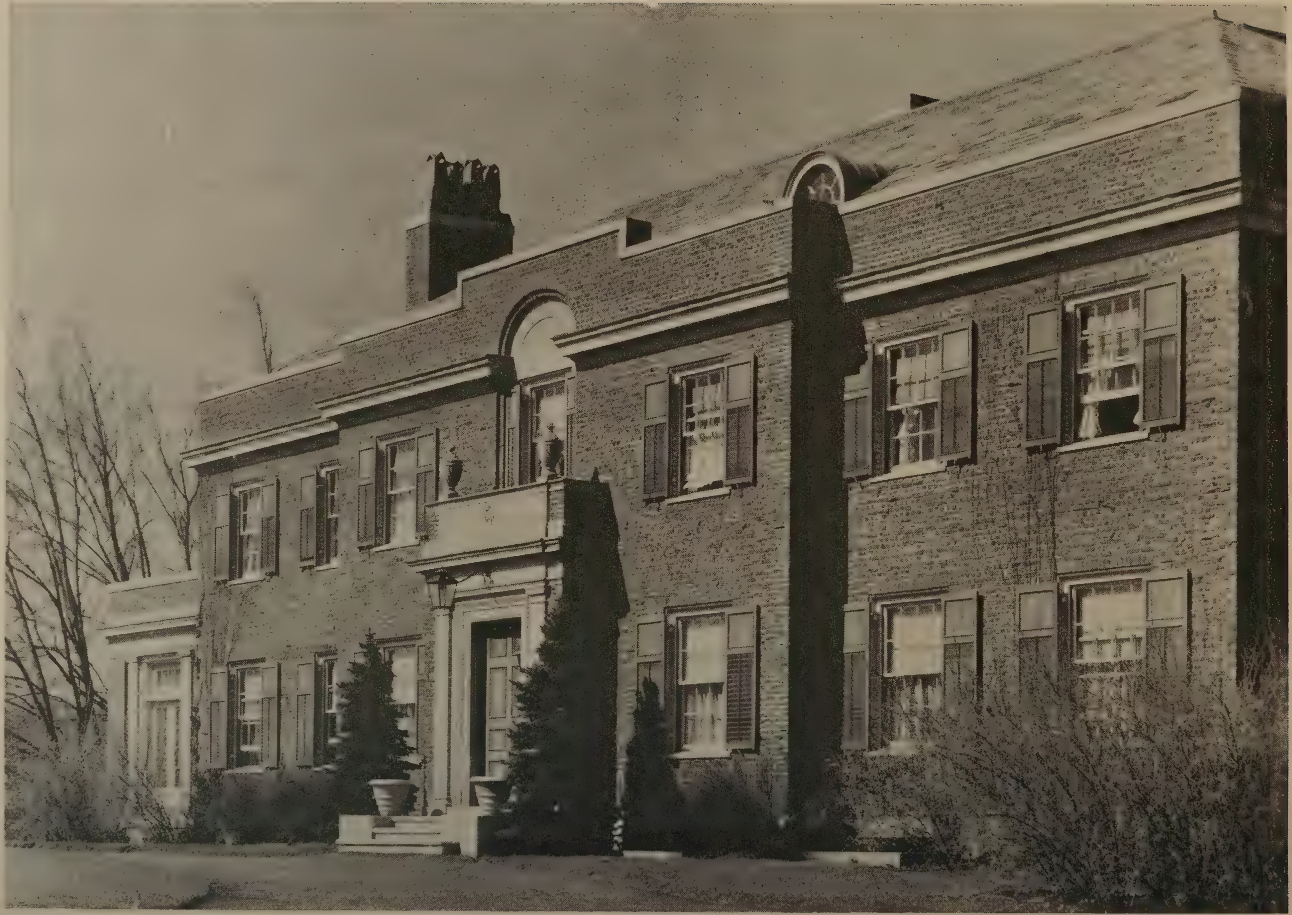
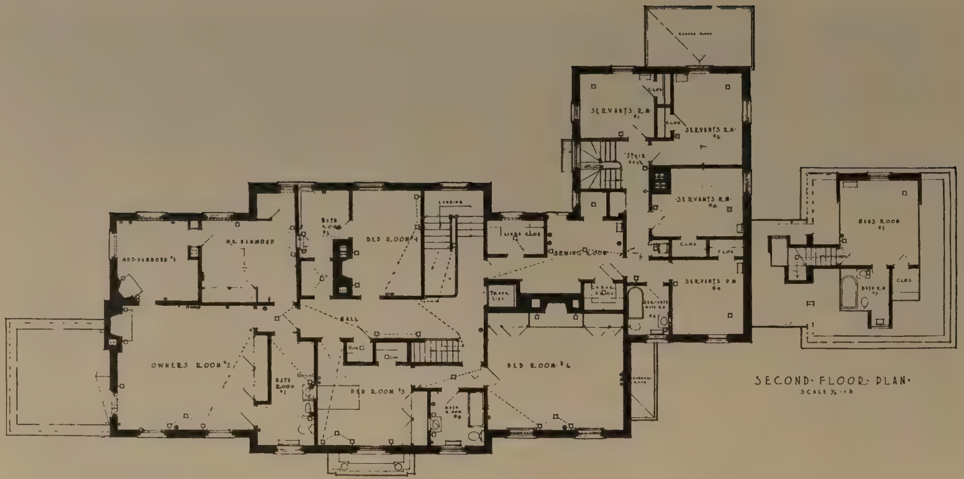


Photo, Arthur Cushman Haskell

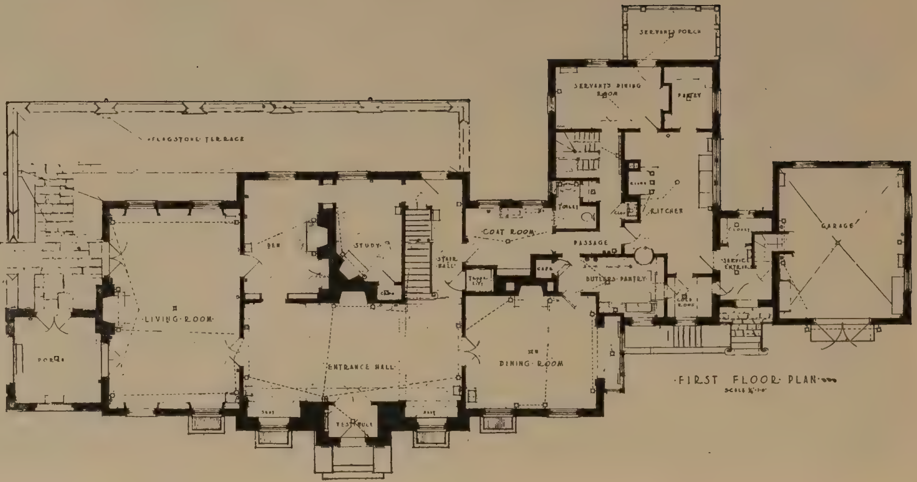
November, 1926

RESIDENCE OF MRS. EDWARD C. HAMMOND, BROOKLINE, MASS.

Parker, Thomas & Rice, Architects



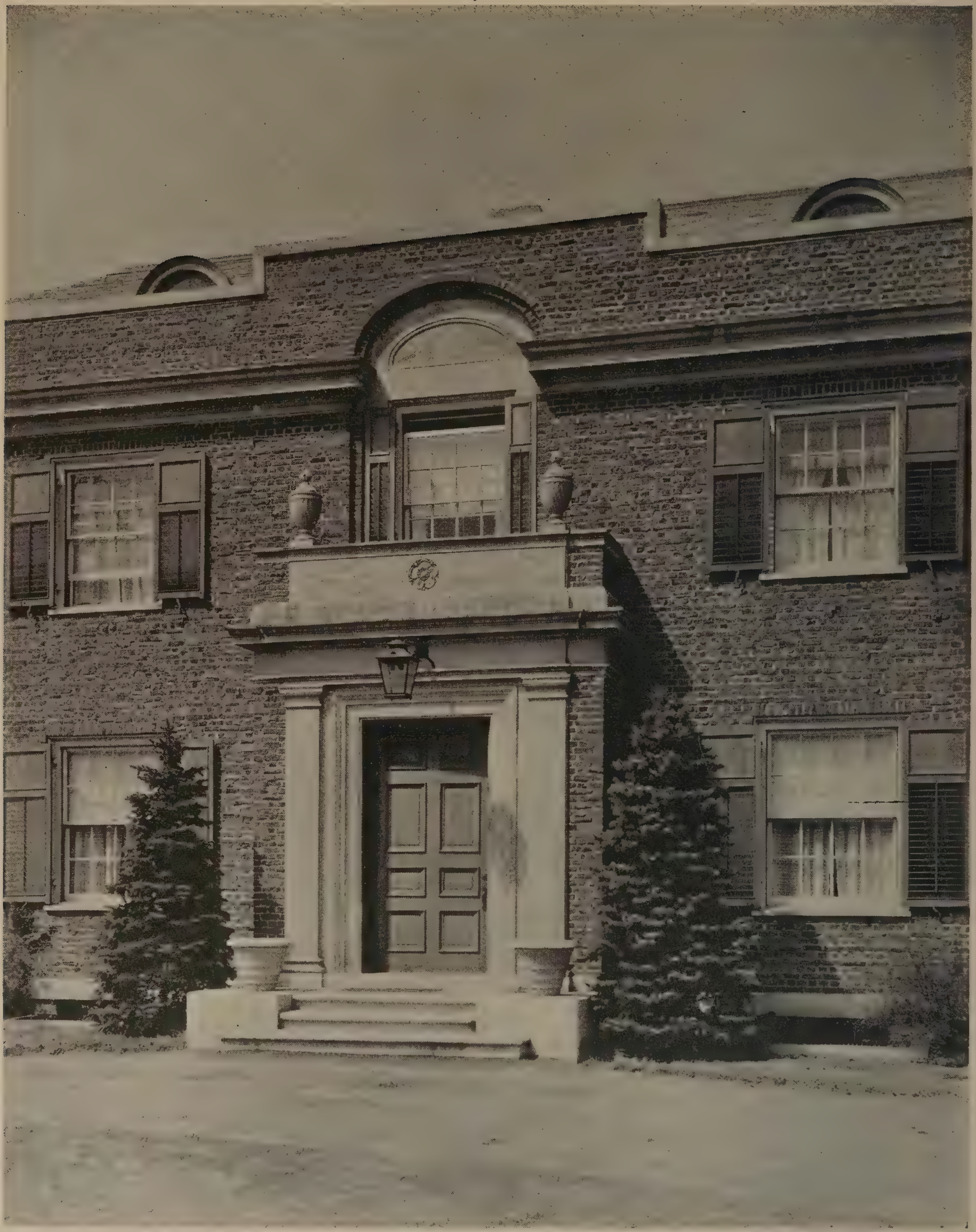
SECOND·FLOOR·PLAN·
SCALE ⅛"-1'0"



·FIRST FLOOR·PLAN·
SCALE ⅛"-1'0"

RESIDENCE OF
MRS. EDWARD C. HAMMOND
BROOKLINE, MASS.

Parker, Thomas & Rice
Architects



Photo, Arthur Cushman Haskell *November,* 1926

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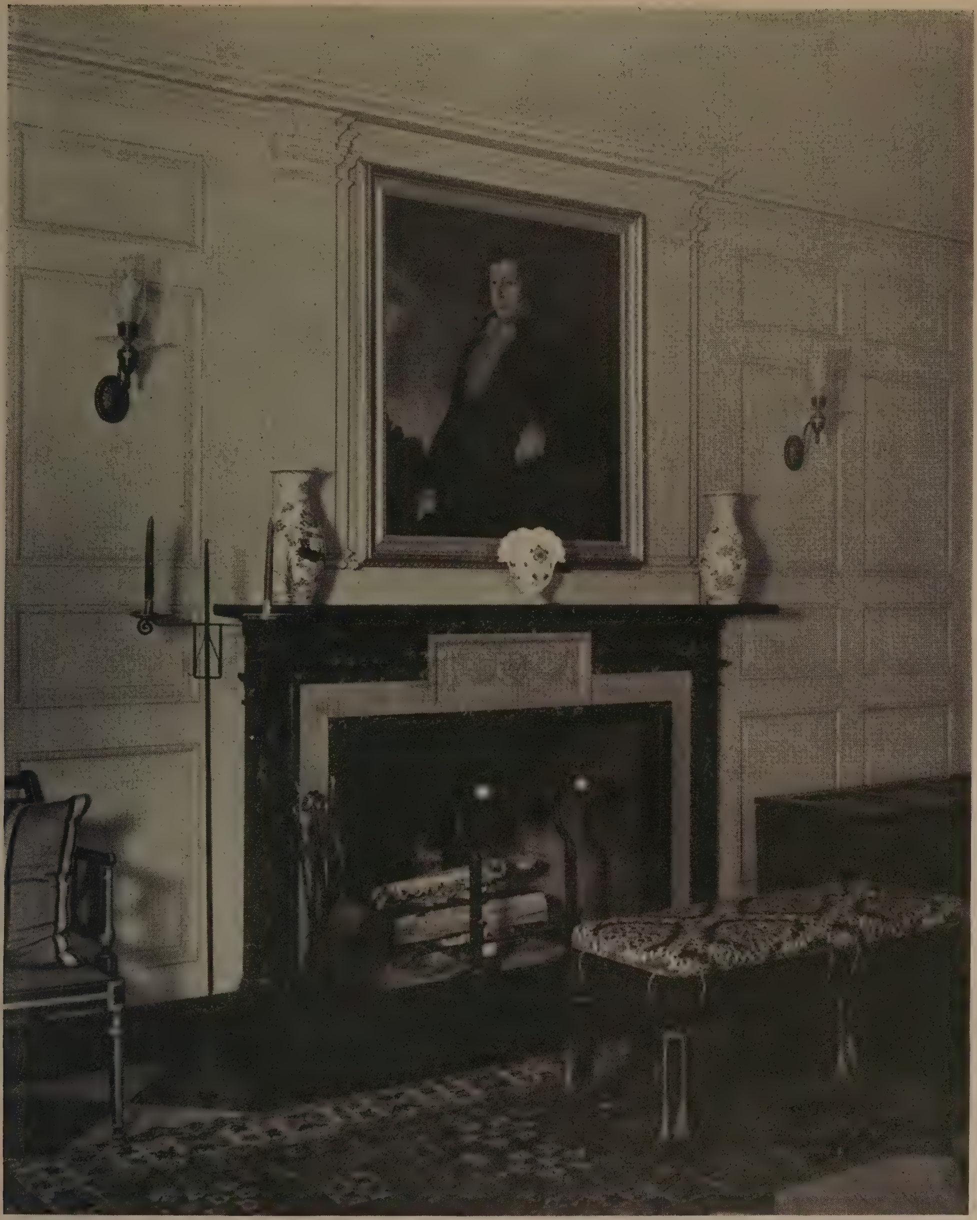
Parker, Thomas & Rice, Architects



Photo, Paul J. Weber

November, 1926

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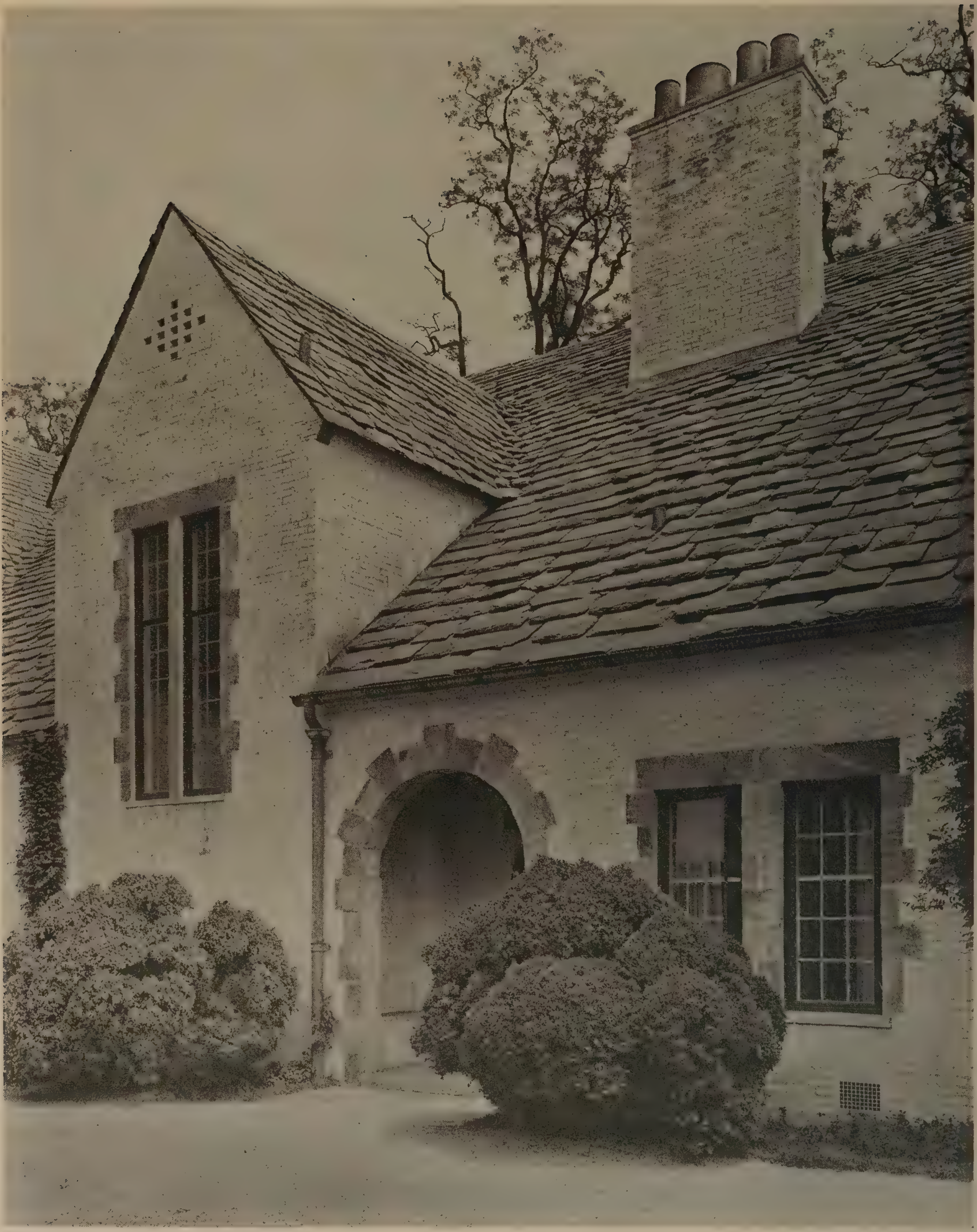
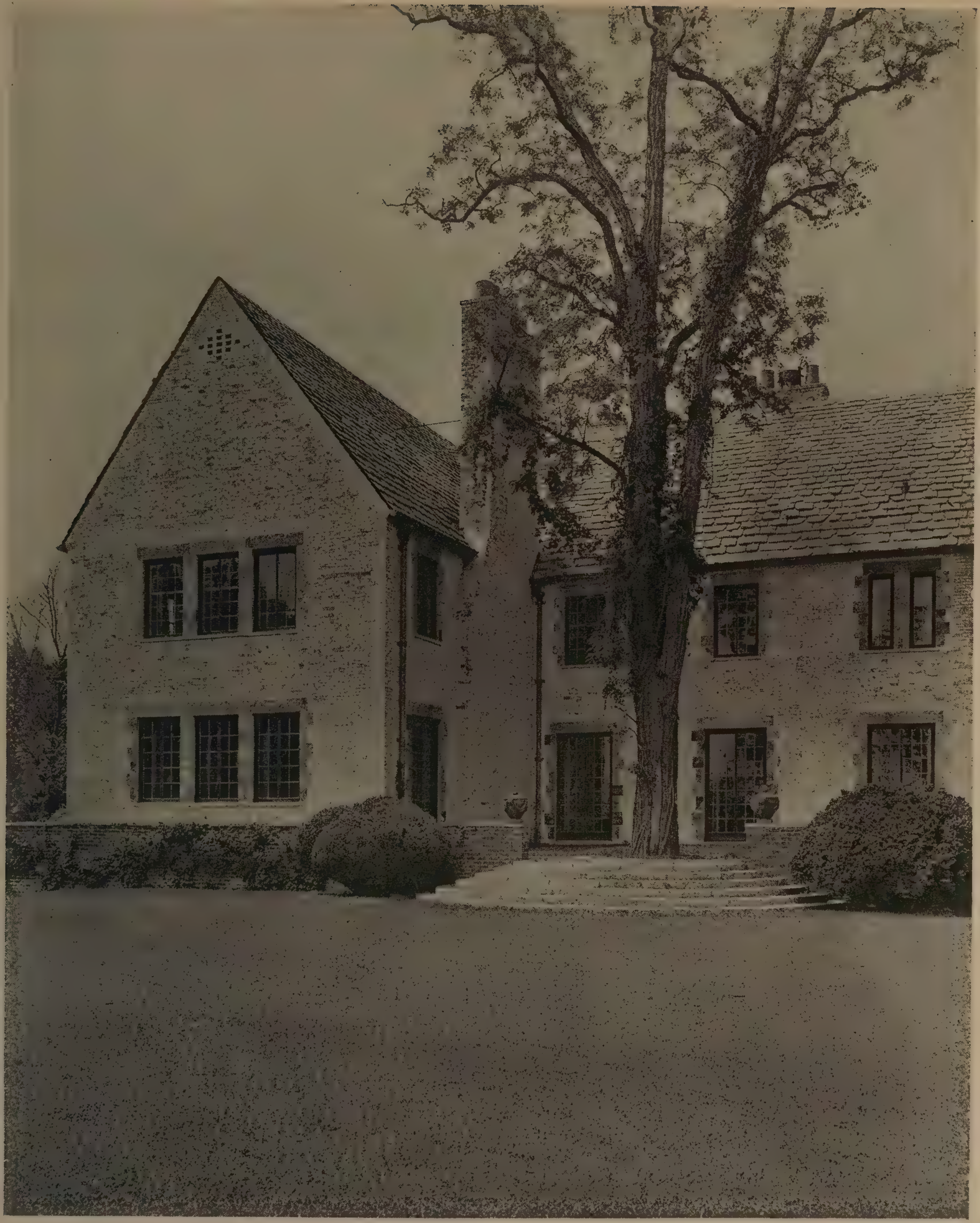
Parker, Thomas & Rice, Architects



Photo, Mattie Edwards Hewitt *November,* 1926

RESIDENCE OF VINCENT ASTOR, ESQ., PORT WASHINGTON, L. I.
Delano & Aldrich, Architects



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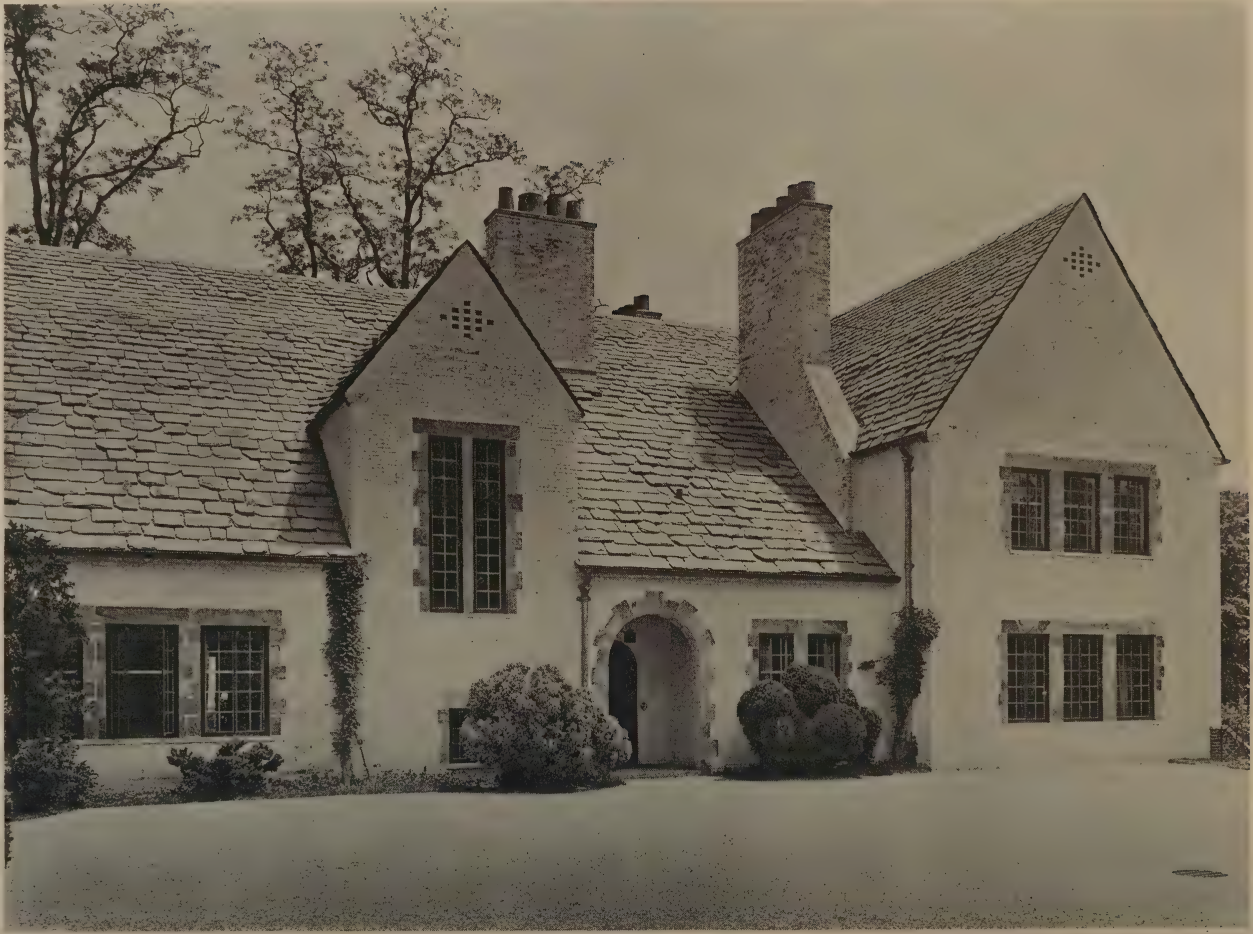

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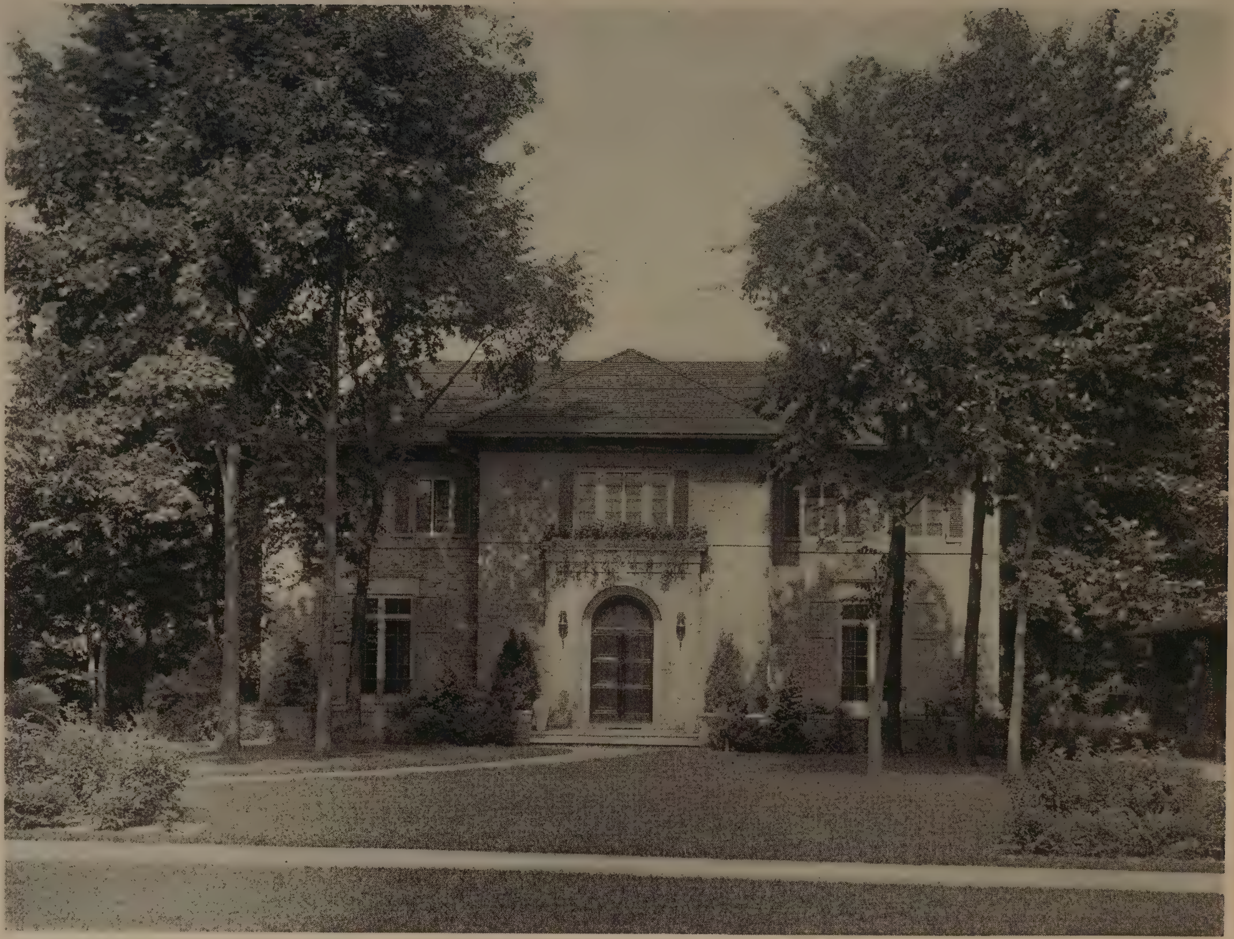
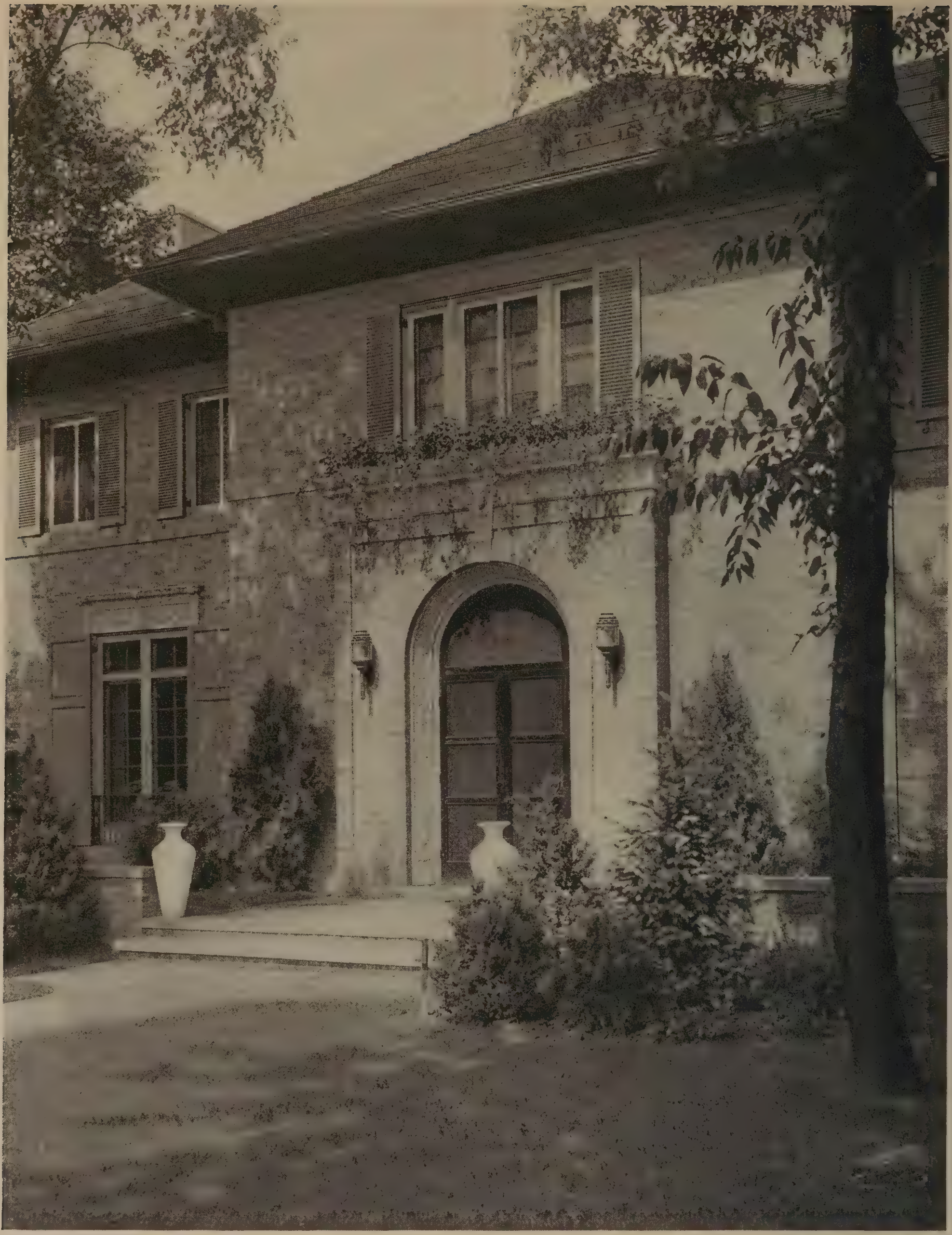


Photo, Thos. Ellison

November, 1926

RESIDENCE OF W. A. GOLDSMITH, ESQ., CLEVELAND, OHIO
Charles R. Greco, Architect; Edward G. Reed, Associate



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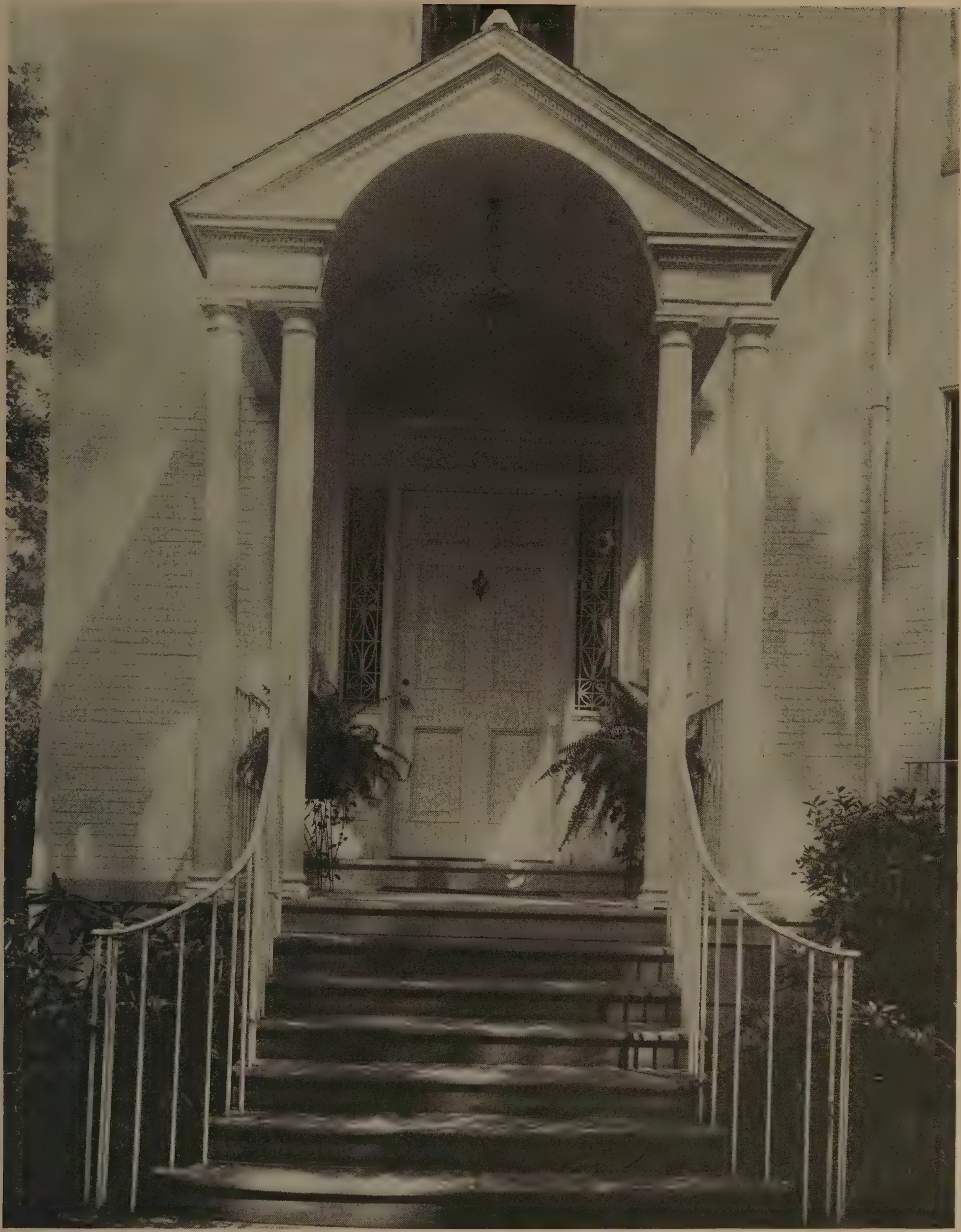
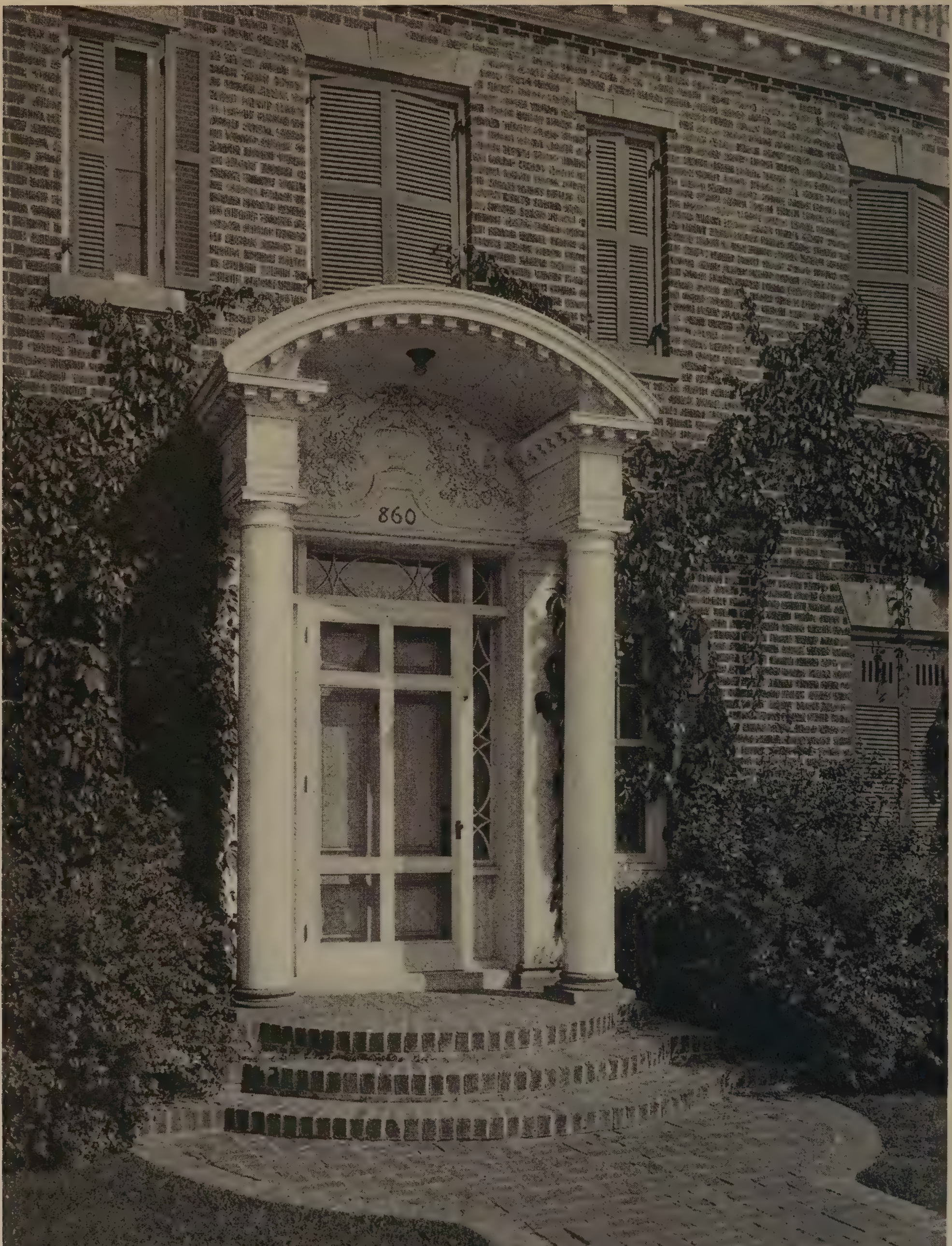


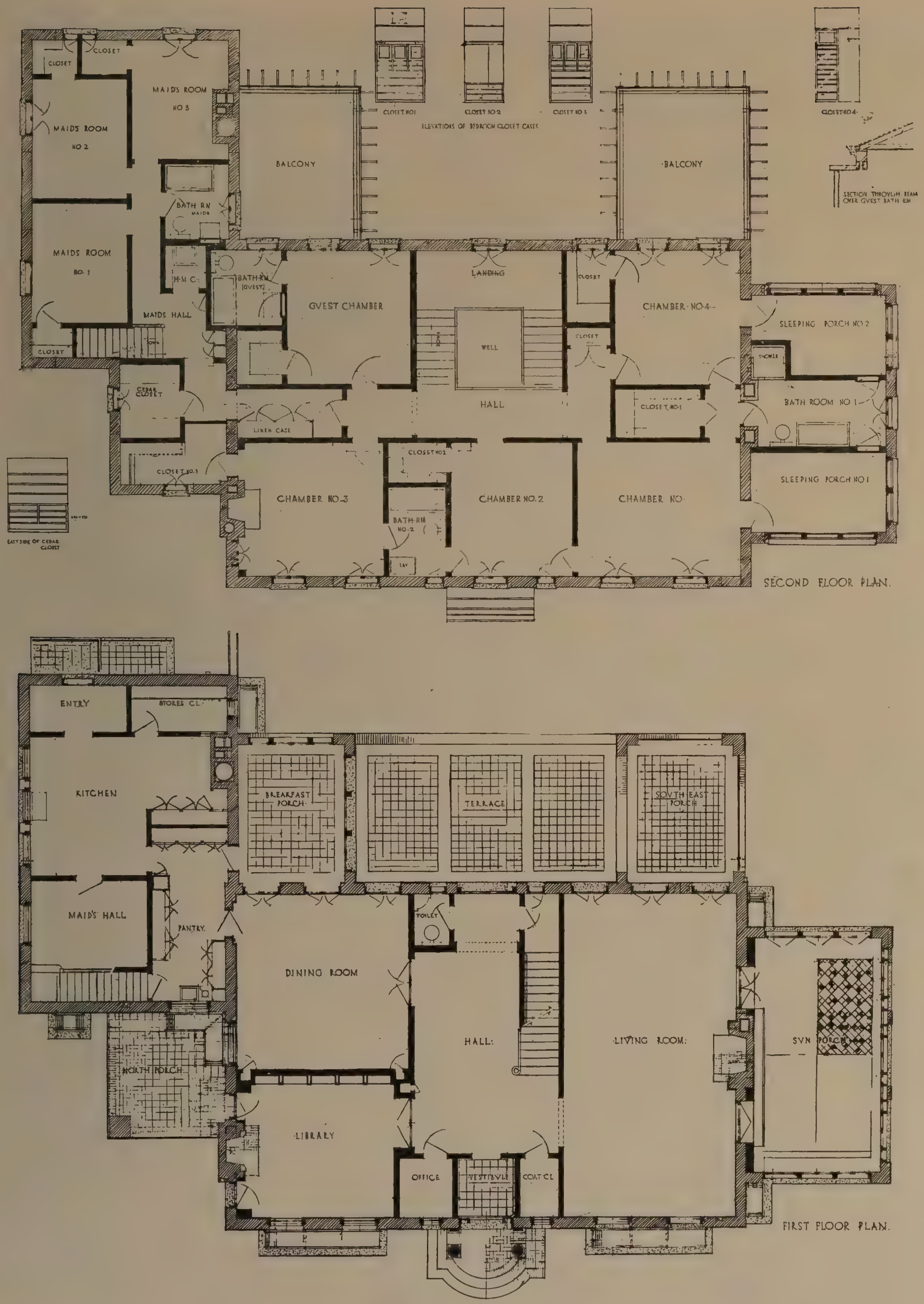
Photo, Foster Disinger *November,* 1926

RESIDENCE OF C. C. VAN DEUSEN, ESQ., SARATOGA SPRINGS, N. Y.
Alfred Hopkins, Architect



November, 1926

RESIDENCE OF D. A. MILLETT, ESQ., DENVER, COLORADO
W. E. & A. A. Fisher, Architects



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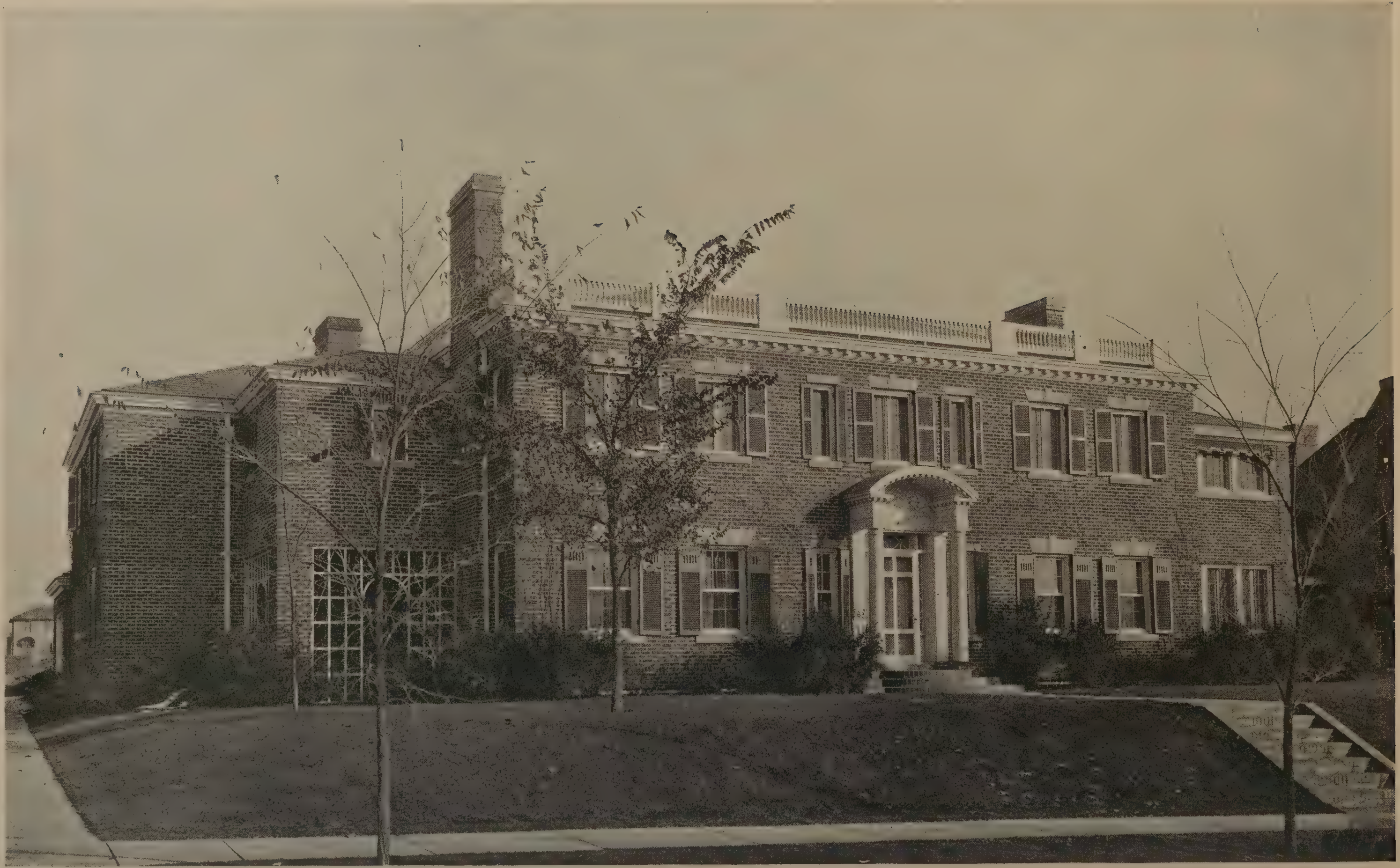

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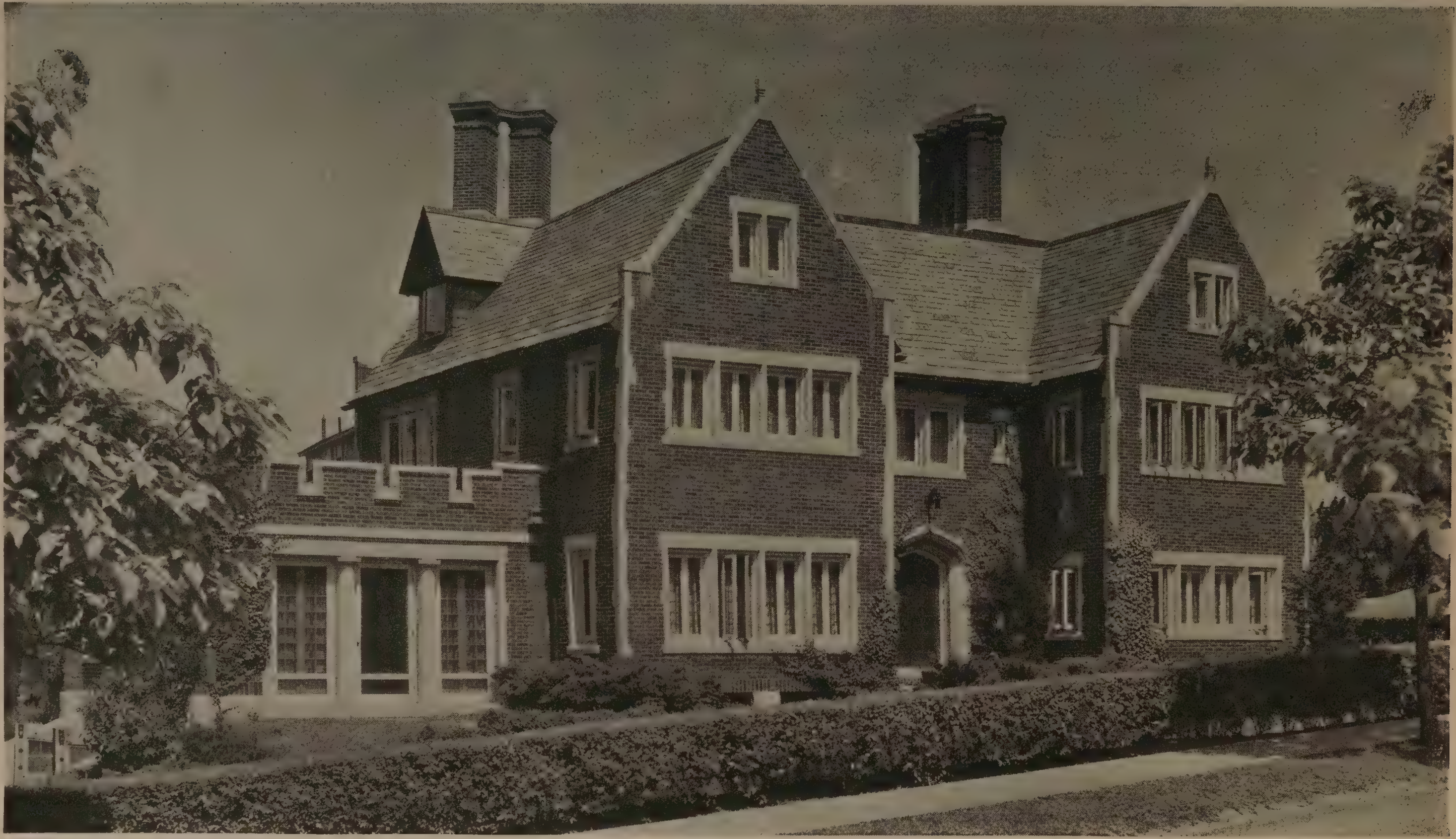
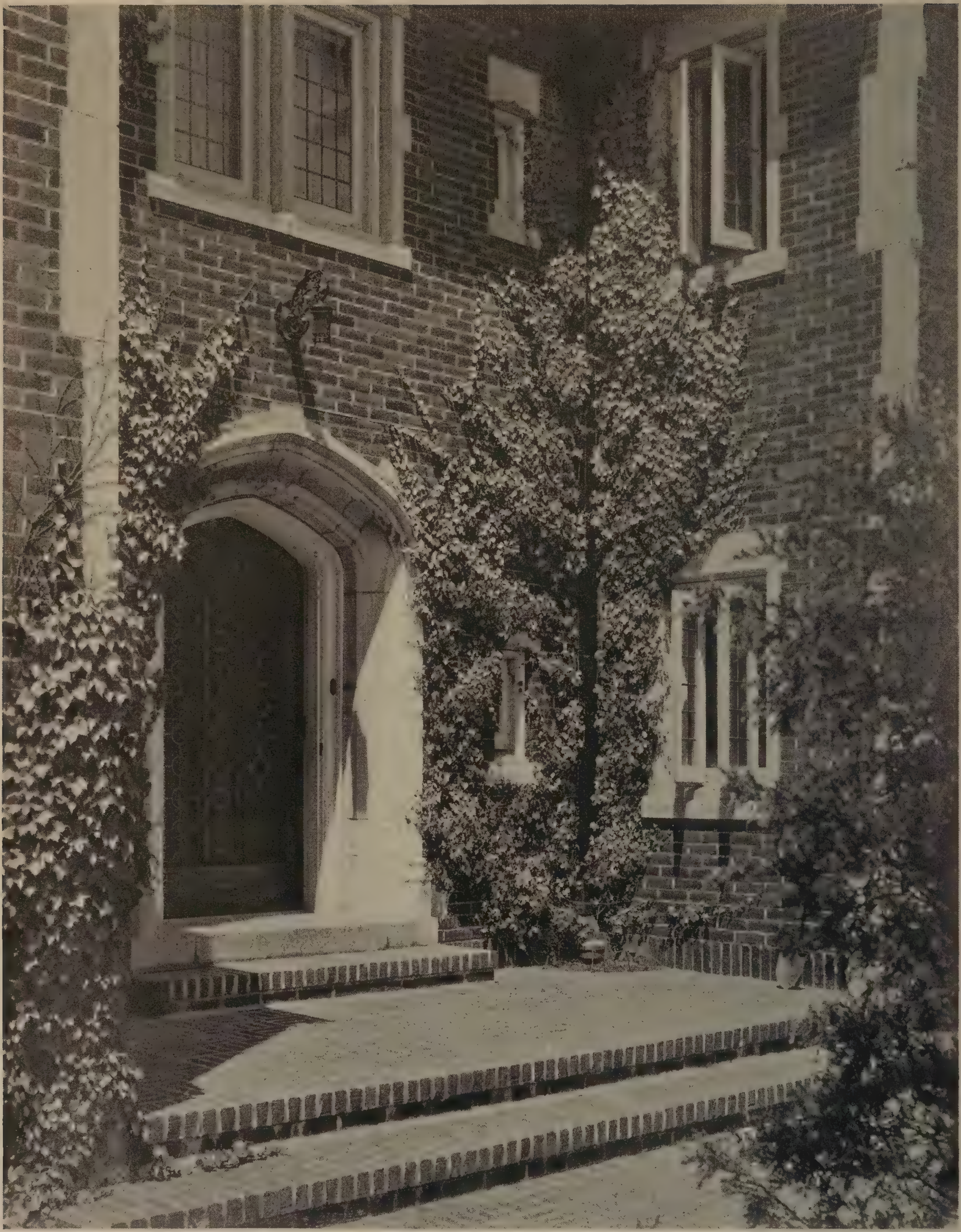


Photo, Arthur Cushman Haskell

November, 1926

RESIDENCE OF WILLIAM GRAY, ESQ., BROOKLINE, MASS.
Ripley & Le Boutillier, Architects



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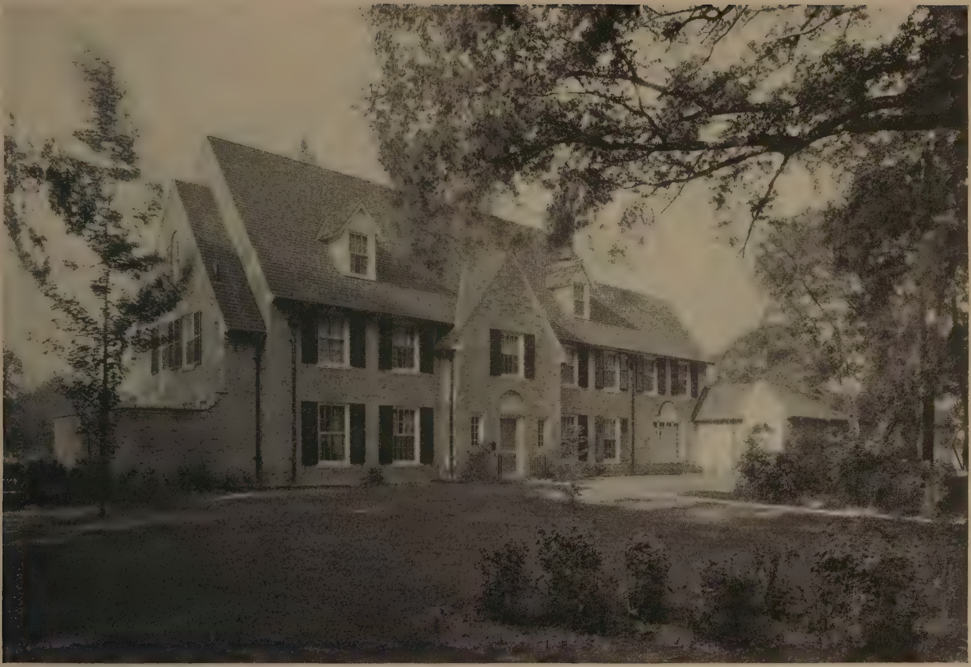
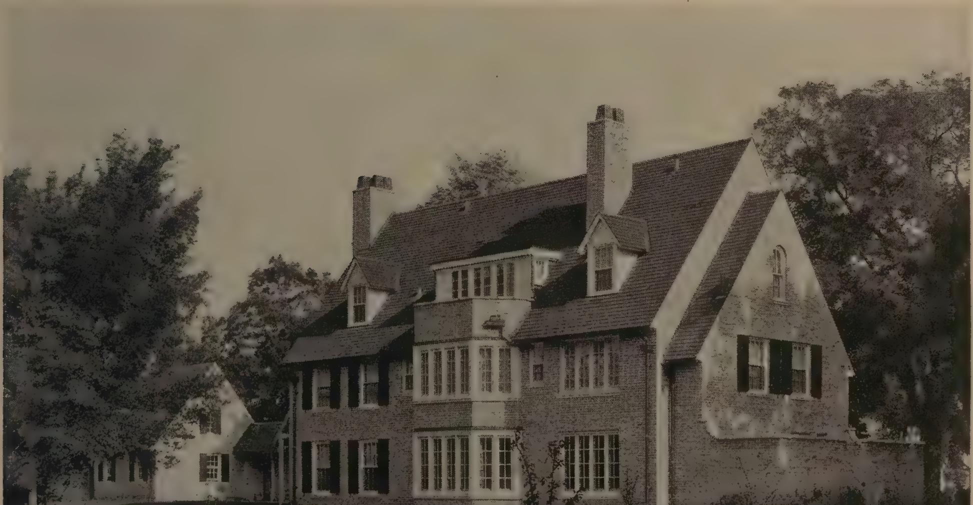




RESIDENCE OF MRS. M. W. NOYES, WINNETKA, ILLINOIS
John Archibald Armstrong, Architect

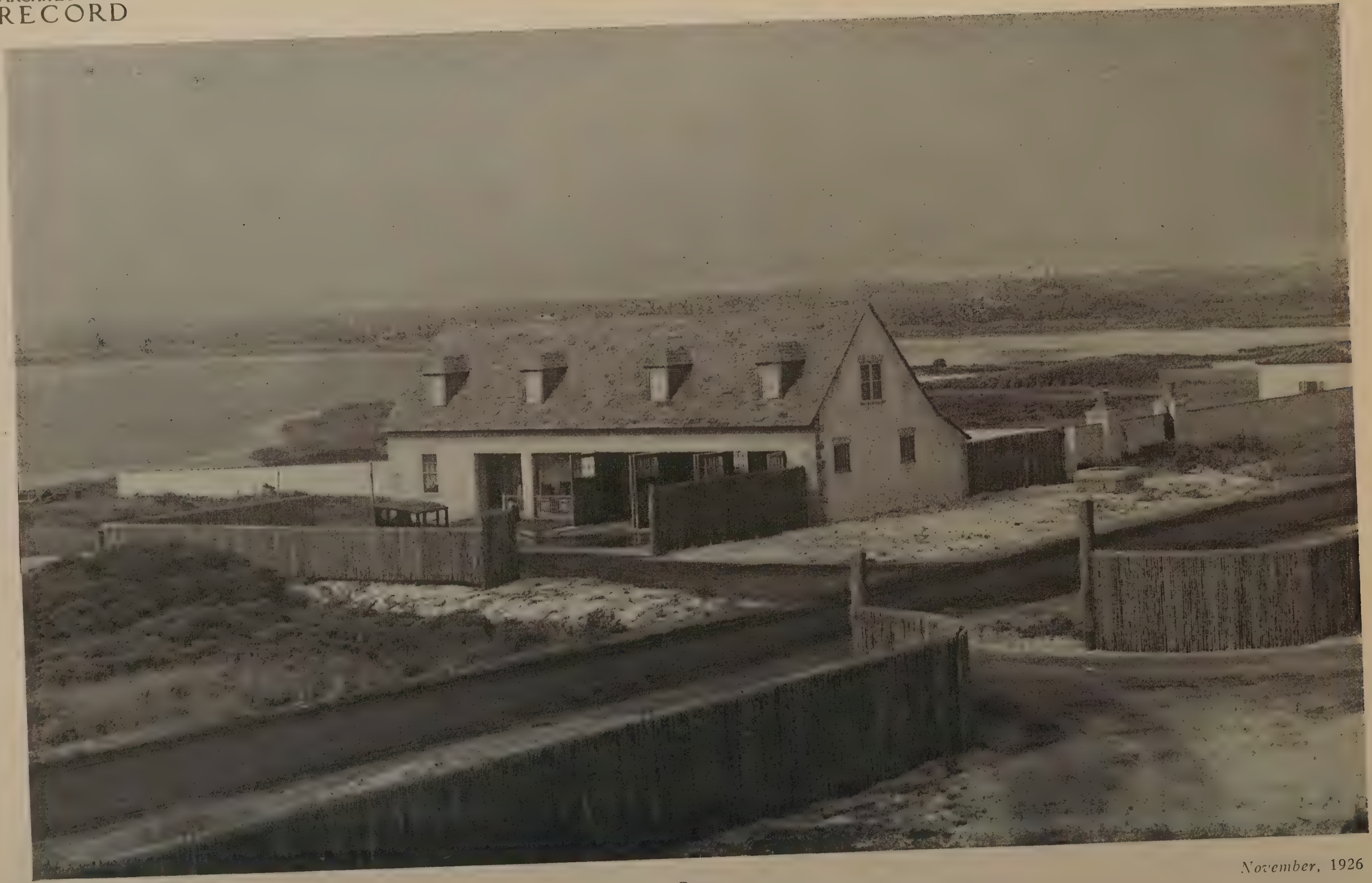
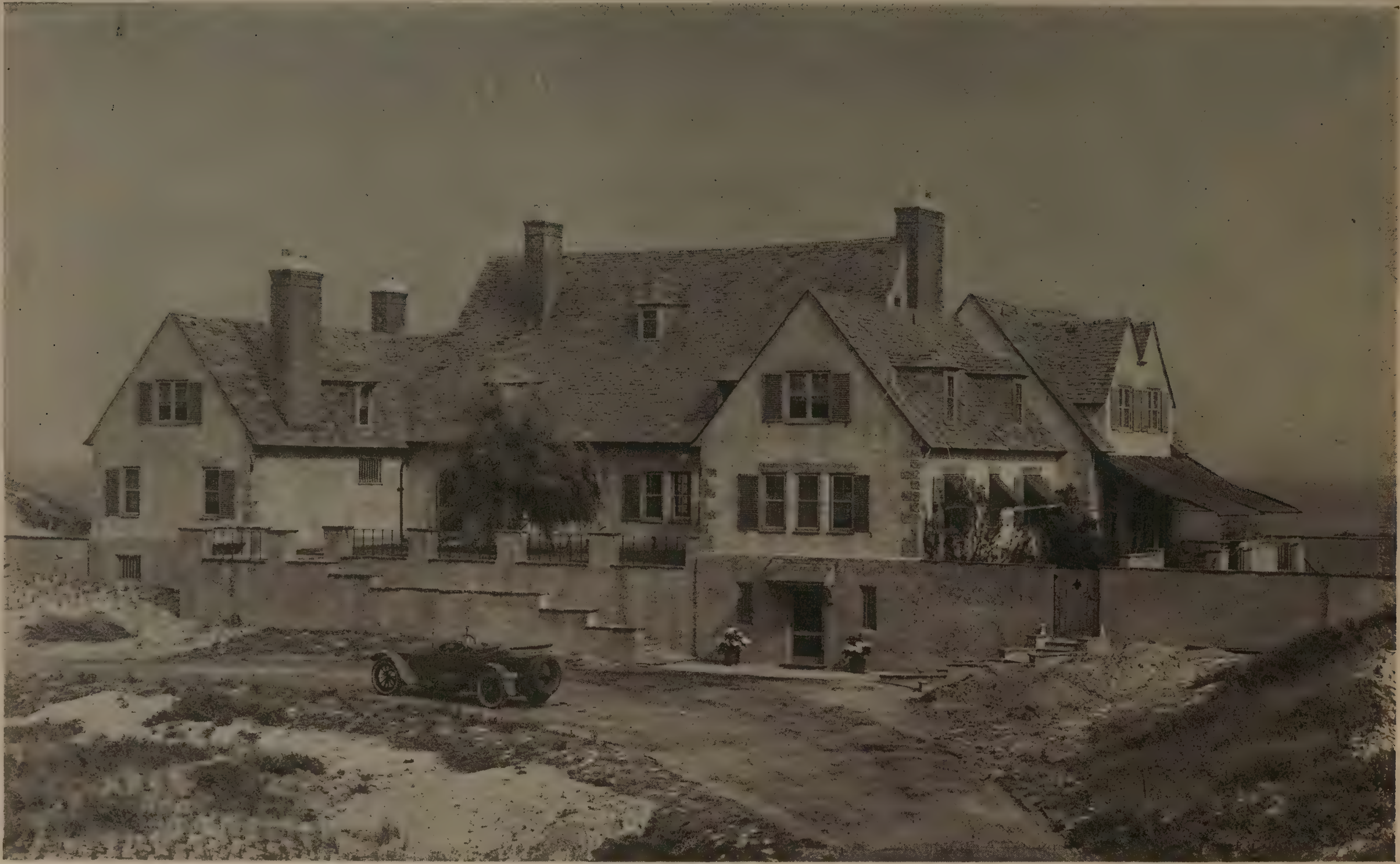


Photo Amemiya

Garage

RESIDENCE OF REGINALD FINCKE, ESQ., SOUTHAMPTON, L. I.

Peabody, Wilson & Brown, Architects



Photo, Amemiya

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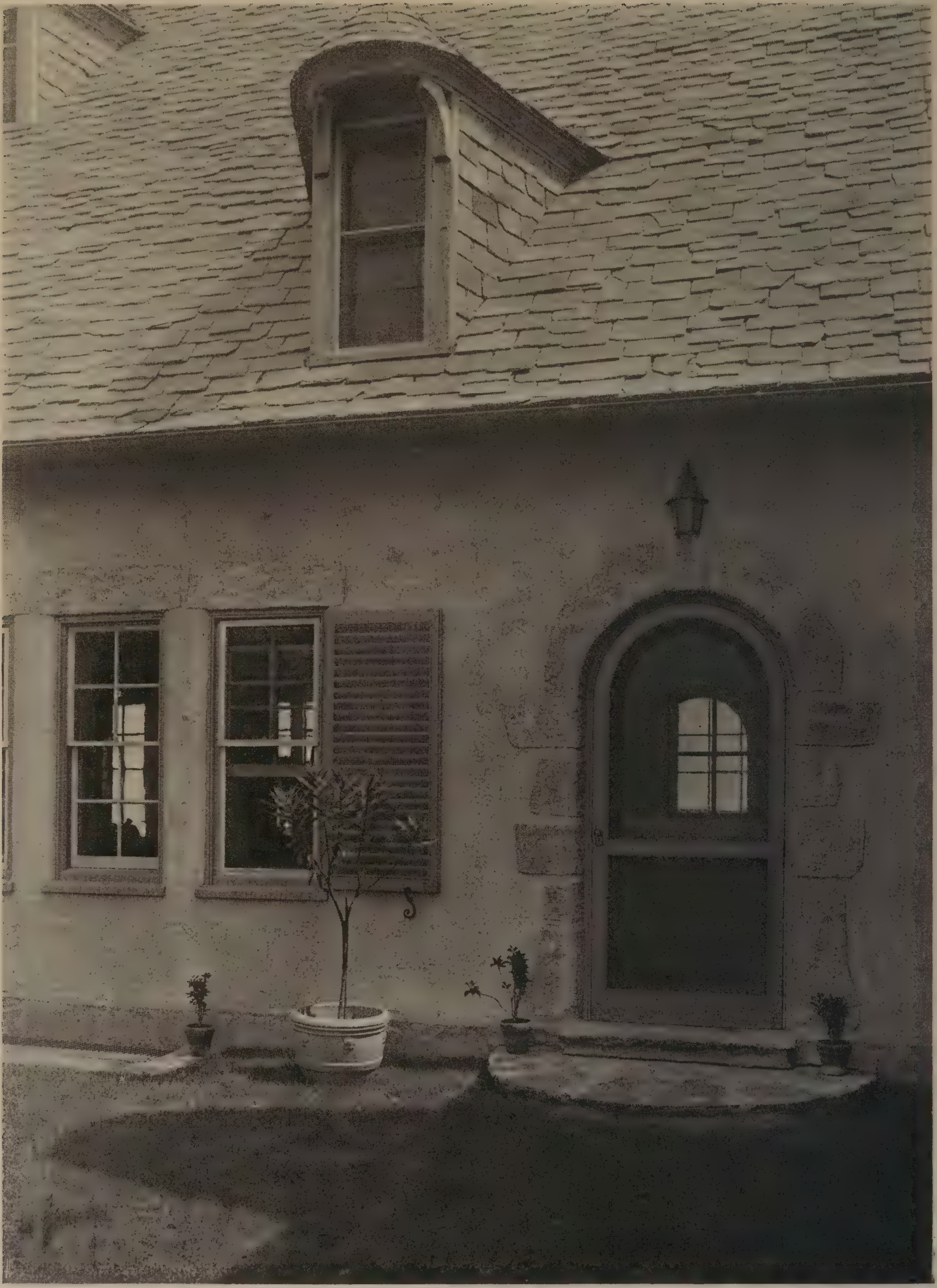

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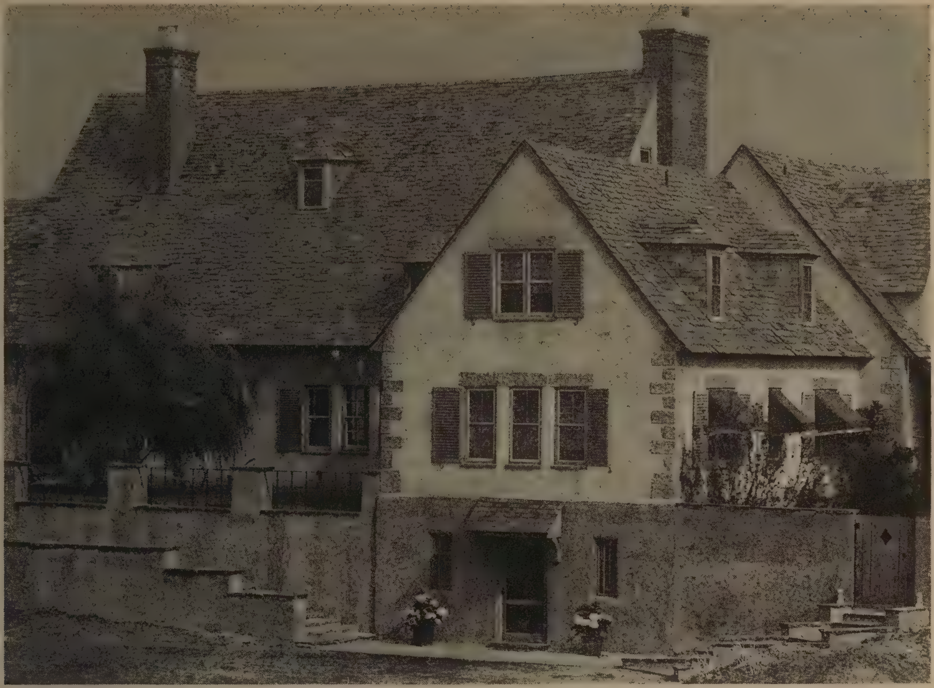

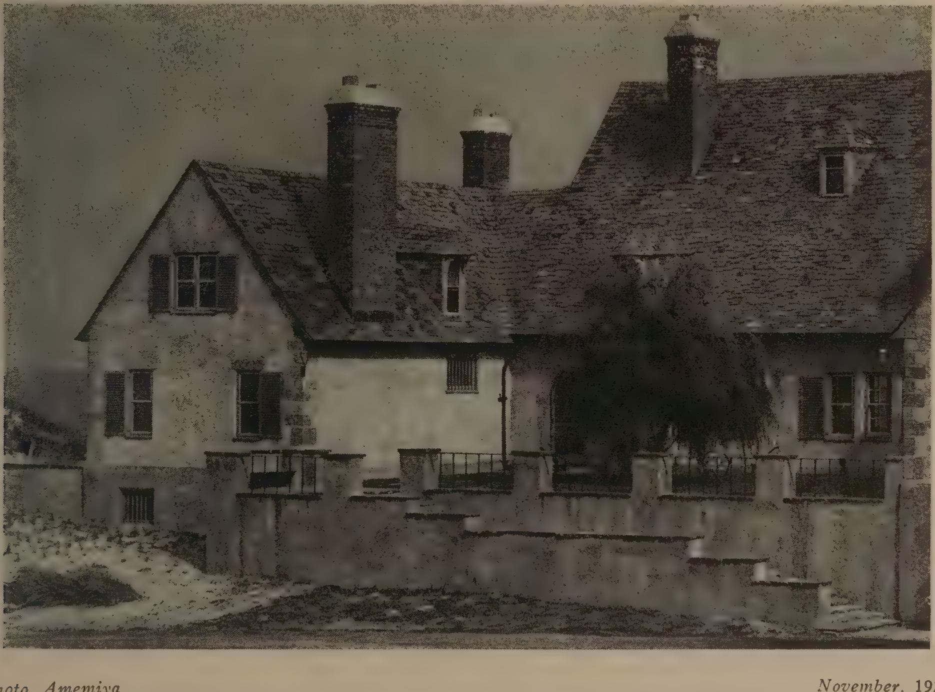

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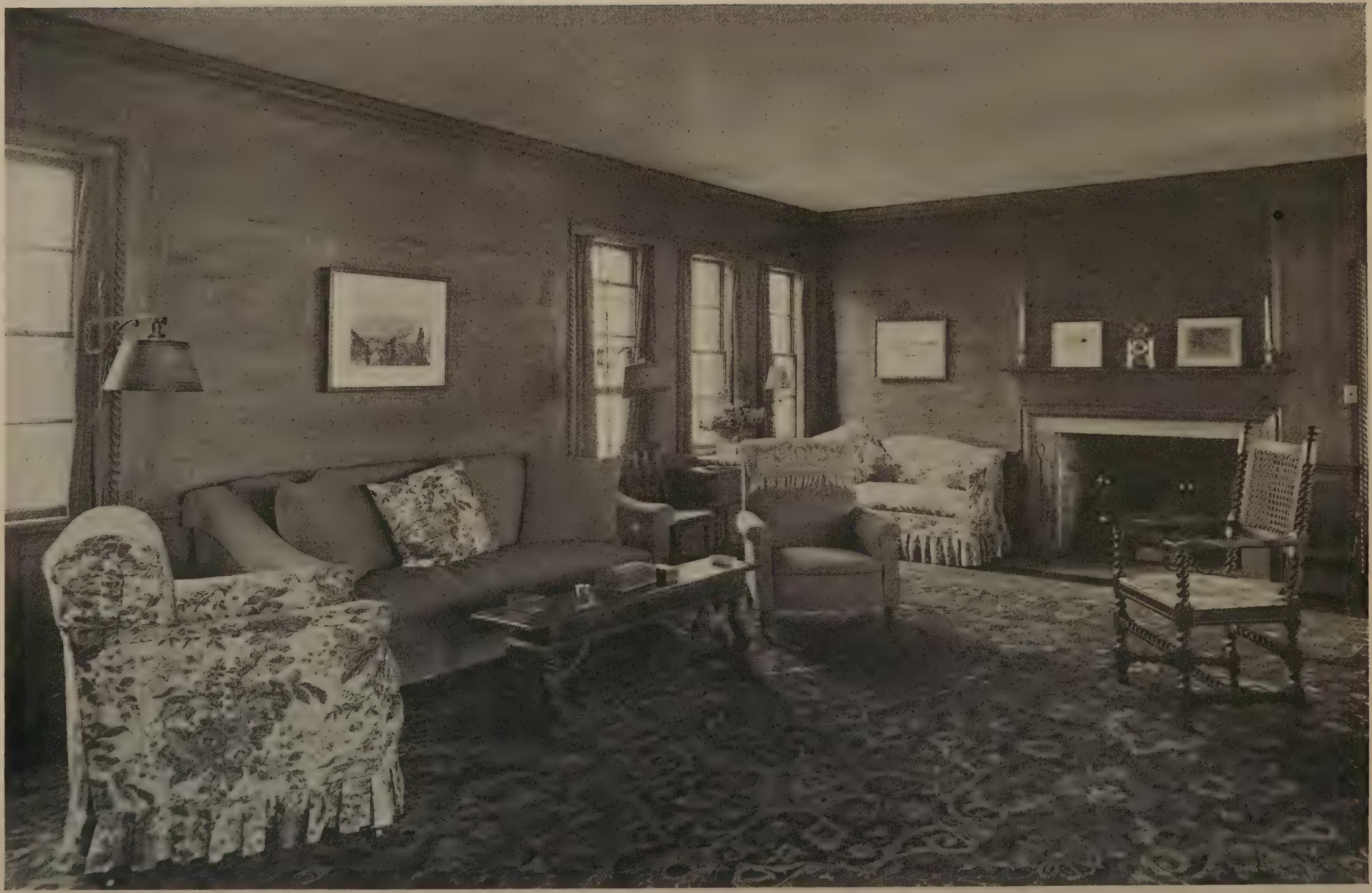

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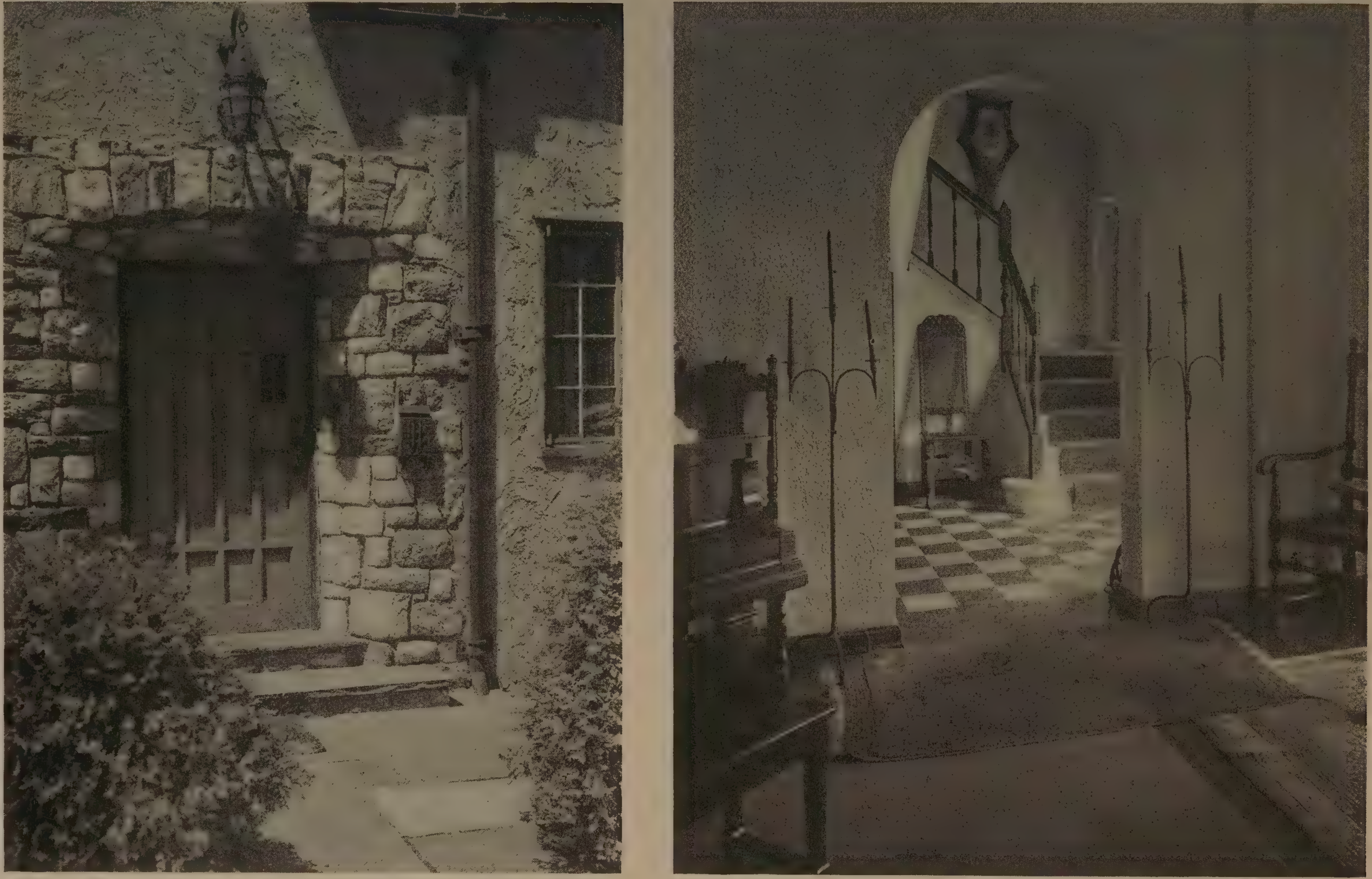
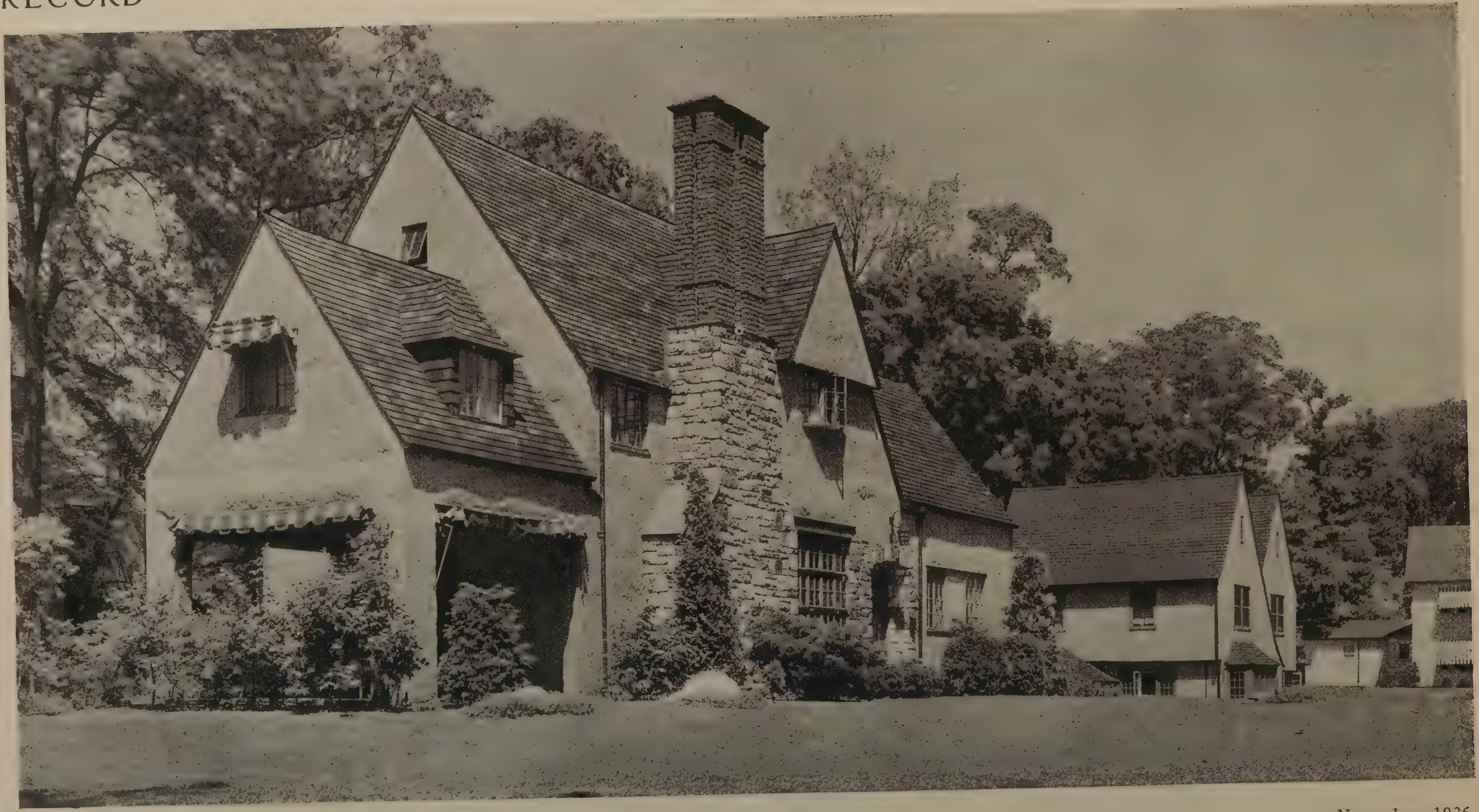


Photo, Gillies

November, 1926

RESIDENCE OF HERBERT HASTINGS, ESQ., BRONXVILLE, N. Y.
Lewis Bowman, Architect



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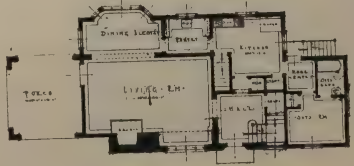

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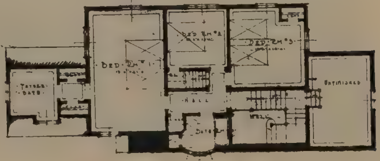
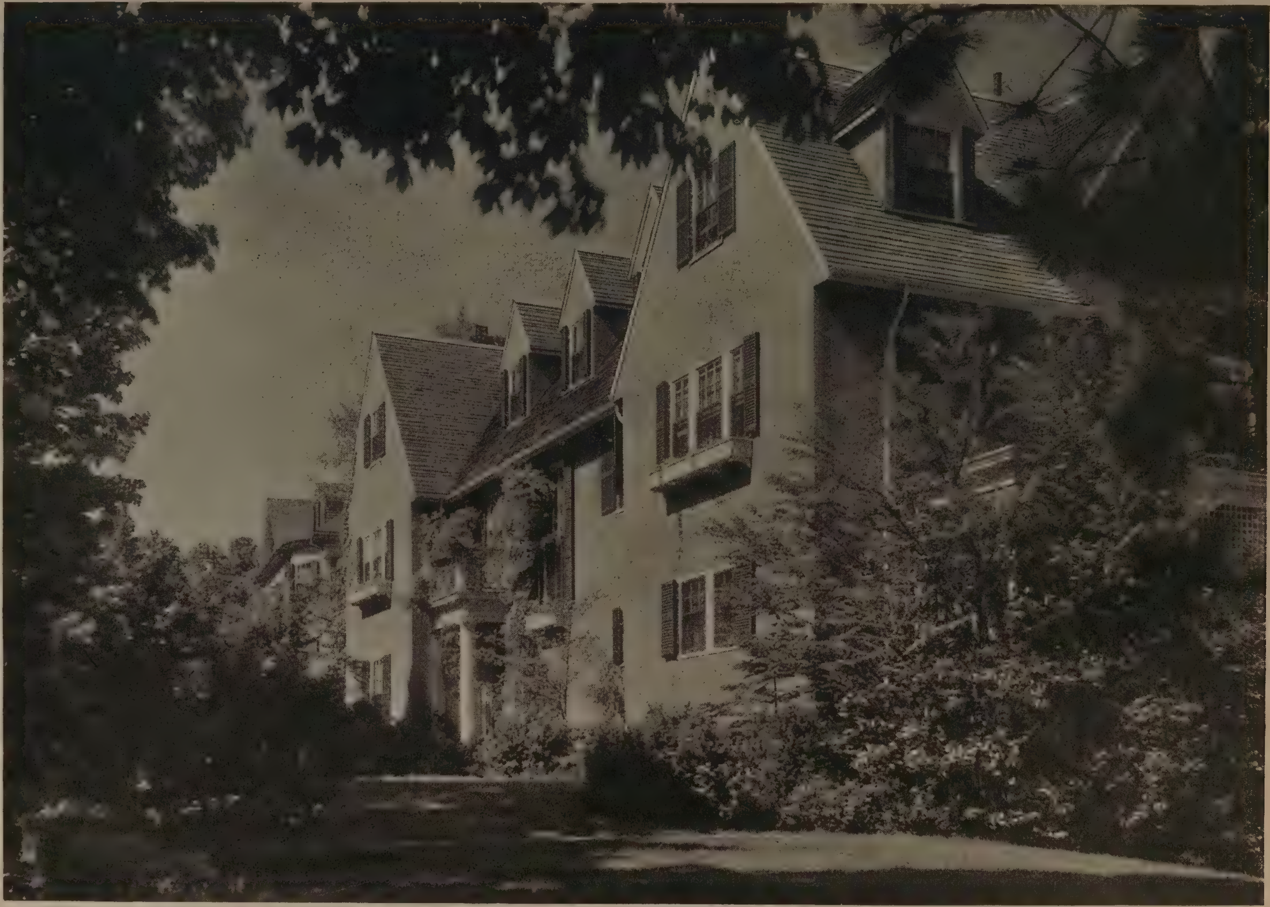
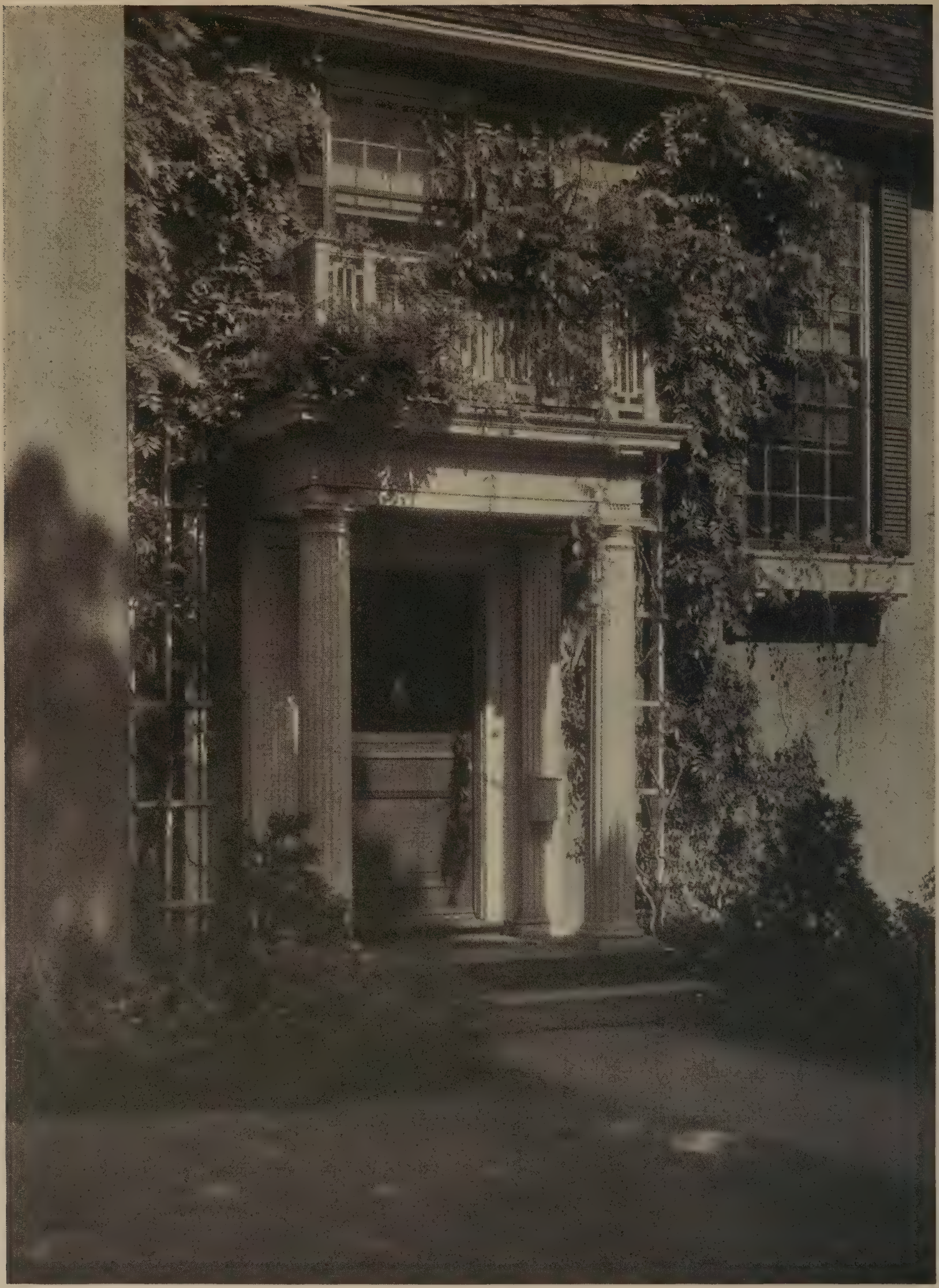




Photo, Paul J. Weber

November, 1926

RESIDENCE OF FRANKLIN R. JOHNSON, ESQ., BROOKLINE, MASS.
Andrews, Jones, Biscoe & Whitmore, Architects



Photo, *Paul J. Weber*

November, 1926

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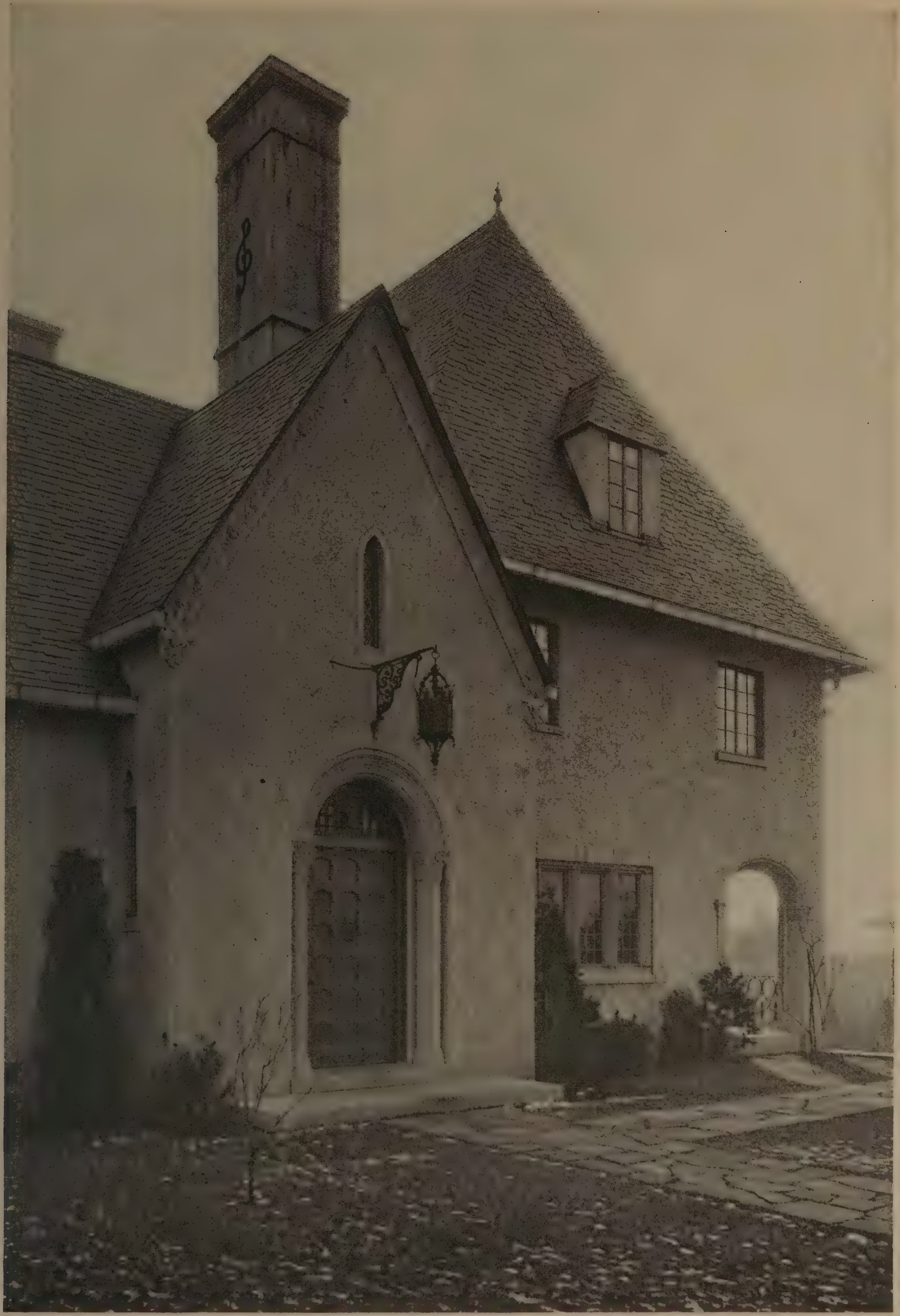
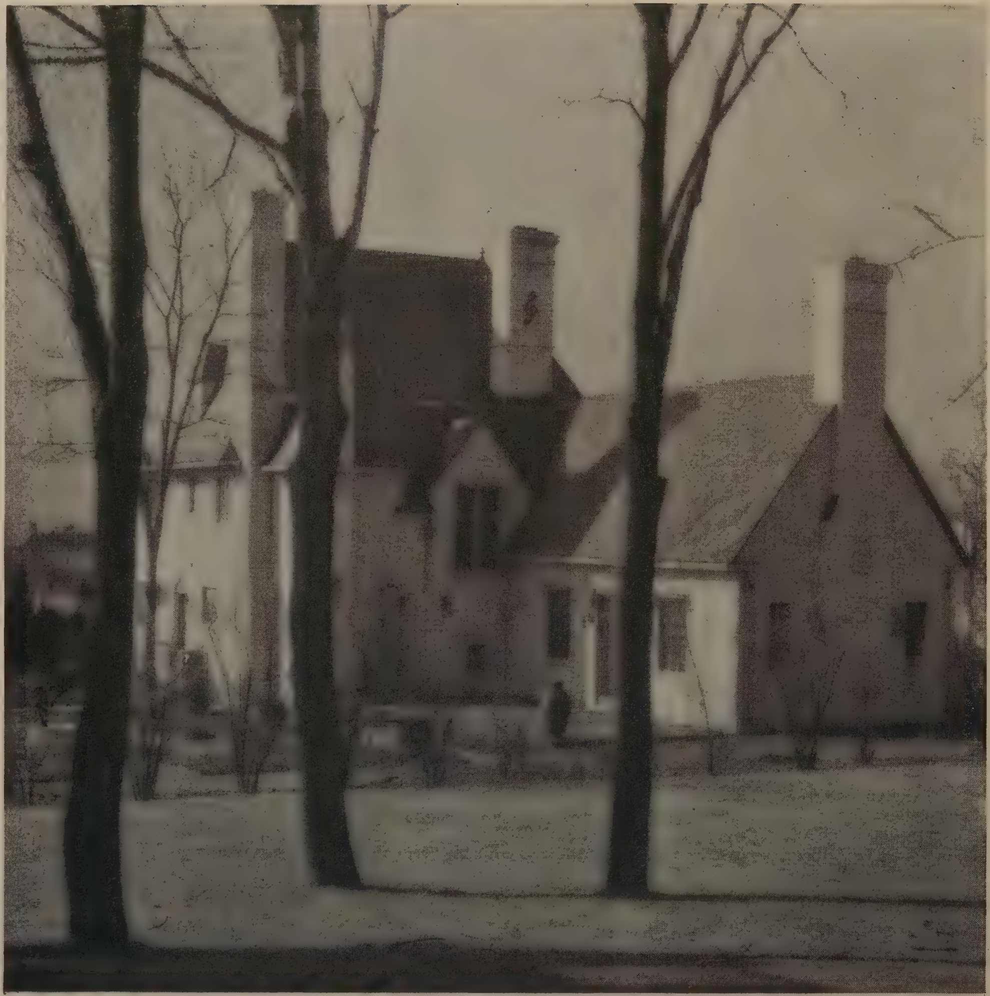
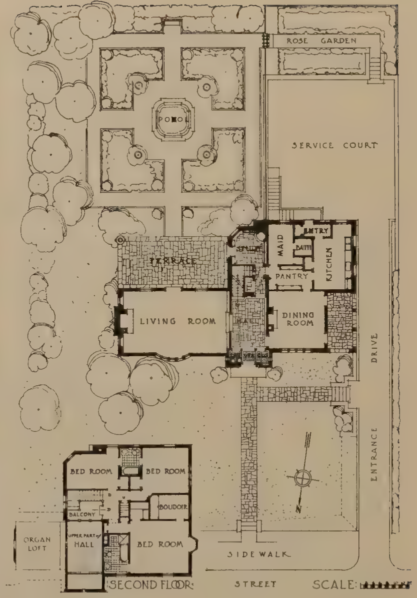


Photo, S. H. Gottscho *November,* 1926

RESIDENCE OF G. S. JACOBSON, ESQ., NEW ROCHELLE, N. Y.
Oscar Vatet, Architect





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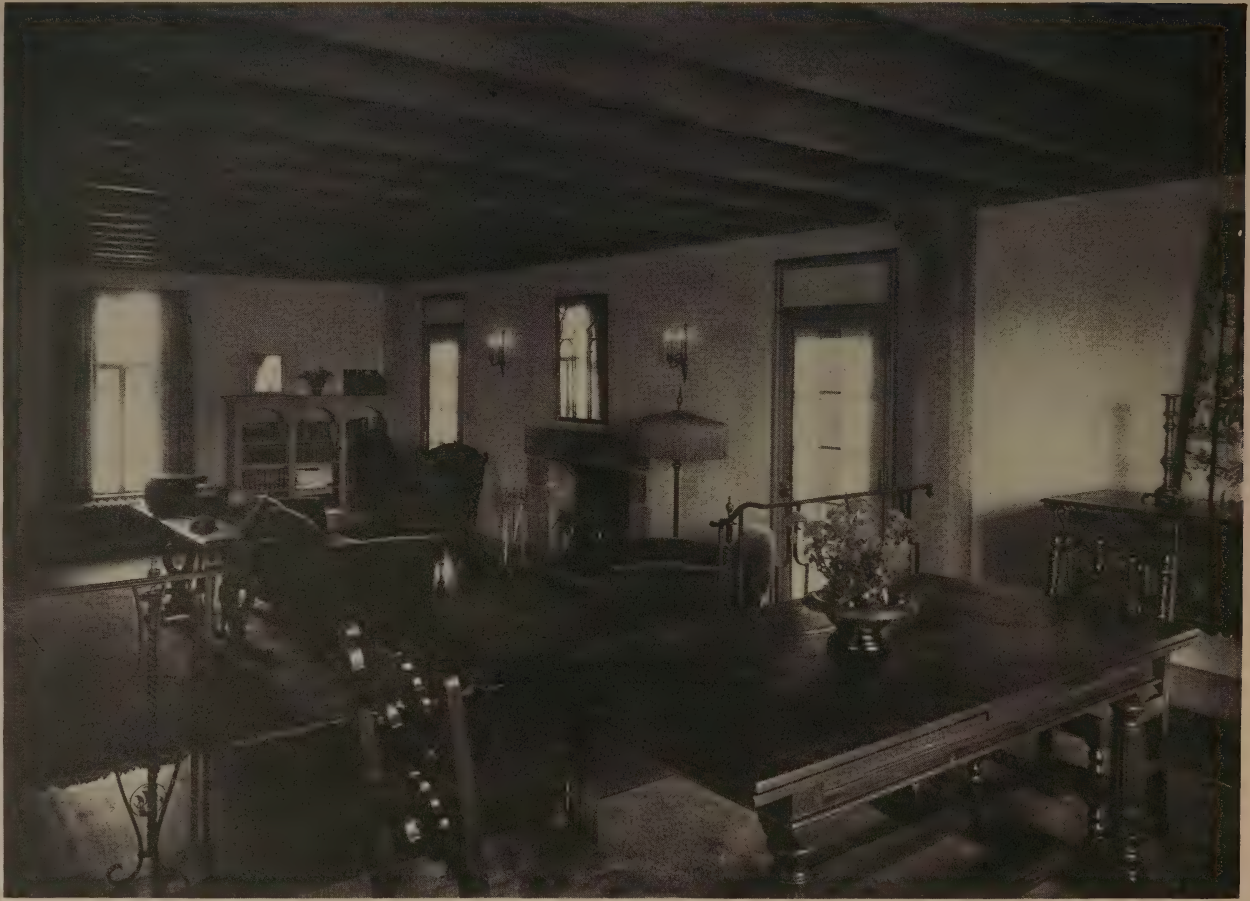
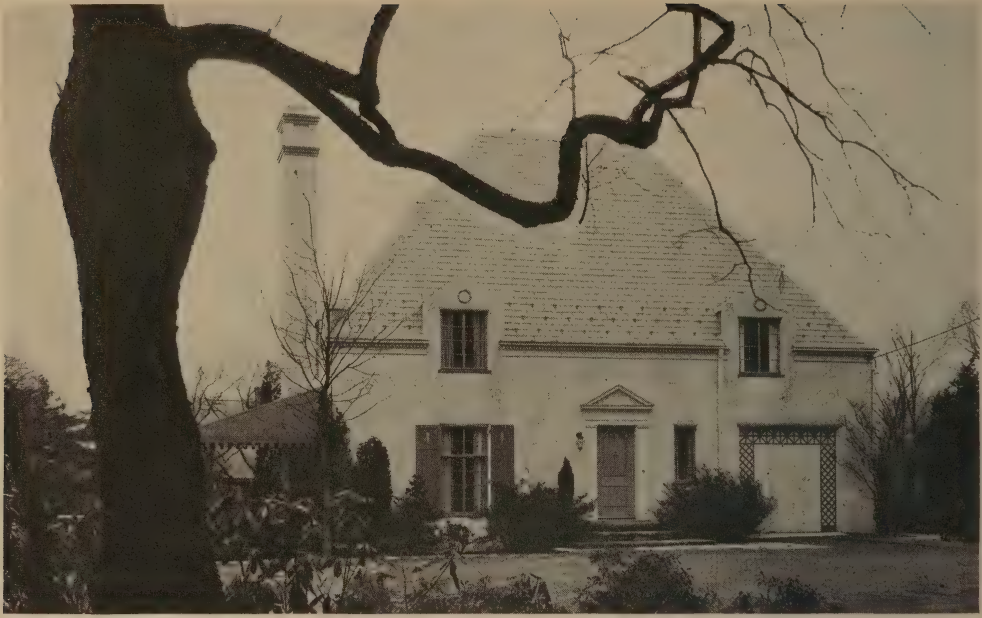
Oscar Vatet, Architect

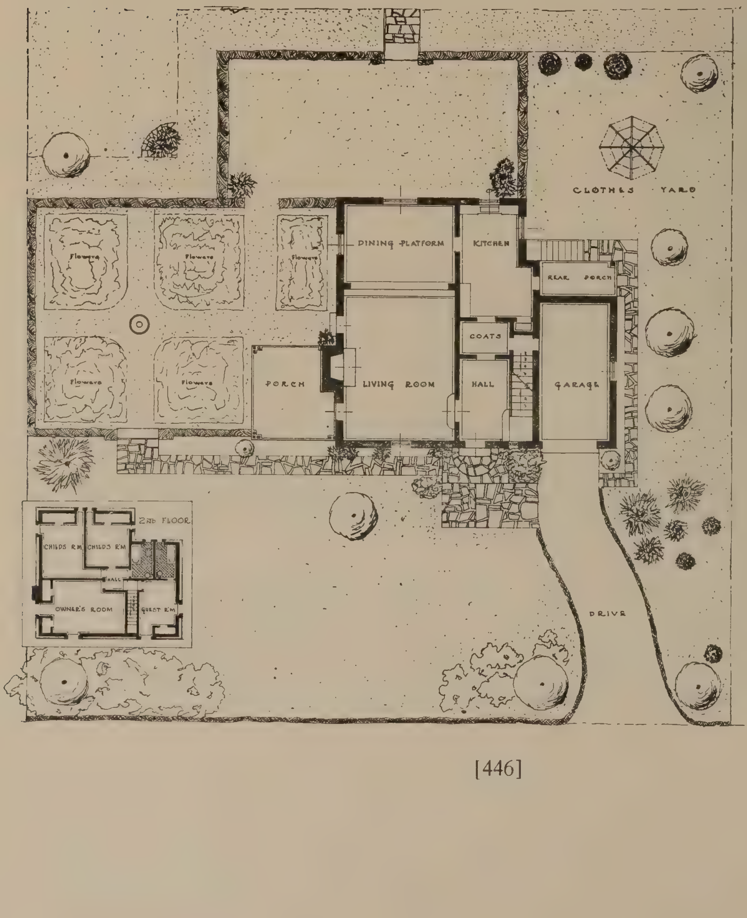
Photo, S. H. Gottscho



Photo, S. H. Gottscho *November, 1926*

RESIDENCE OF WILLIAM E. FRENAYE, ESQ., LLEWELLYN PARK, N. J.
Howard & Frenaye, Architects

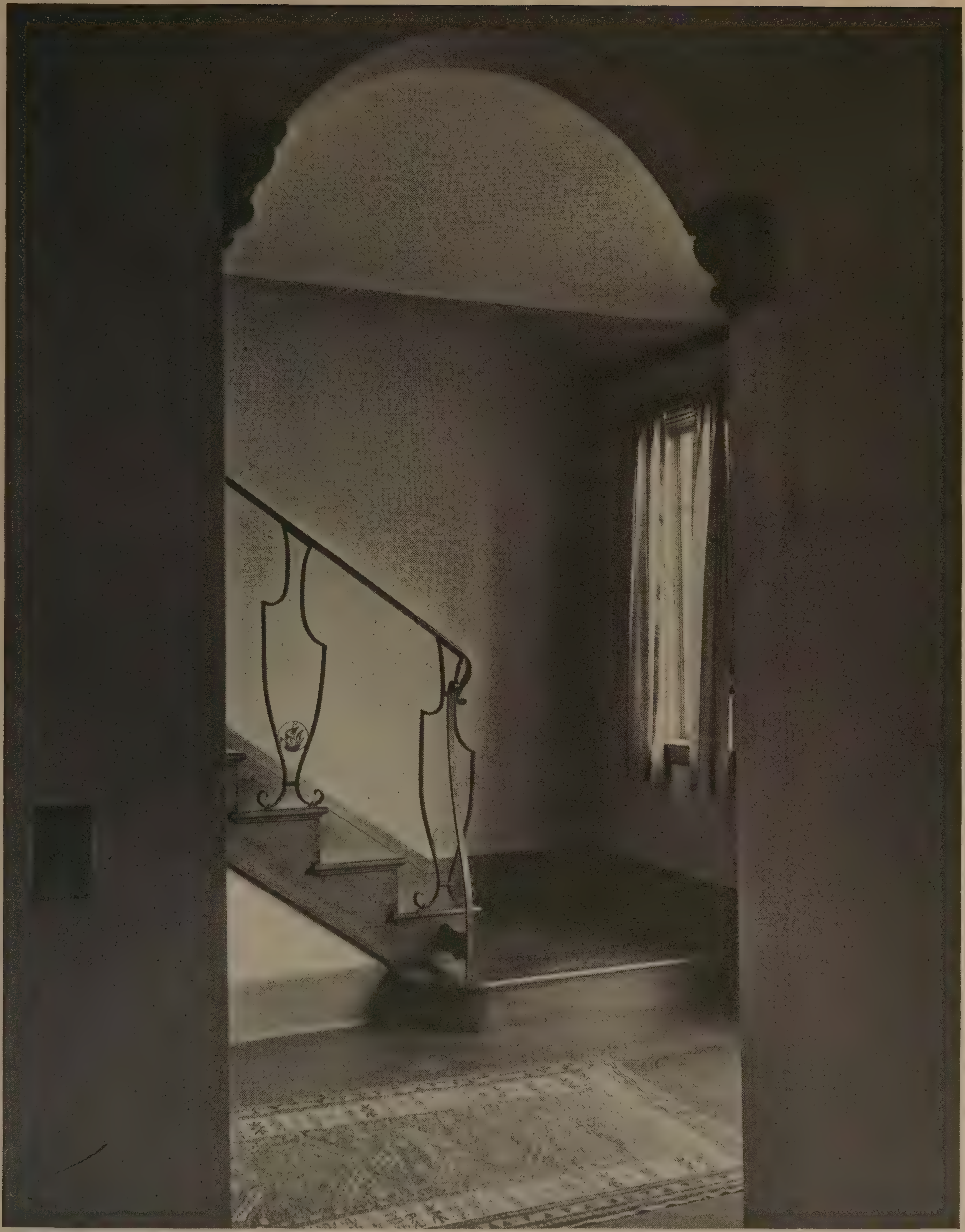




RESIDENCE OF
WILLIAM E. FRENAYE,
ESQ.
LLEWELLYN PARK
N. J.

Howard & Frenaye
Architects

Photo, S. H. Gottscho



Photo, S. H. Gottscho

November, 1926

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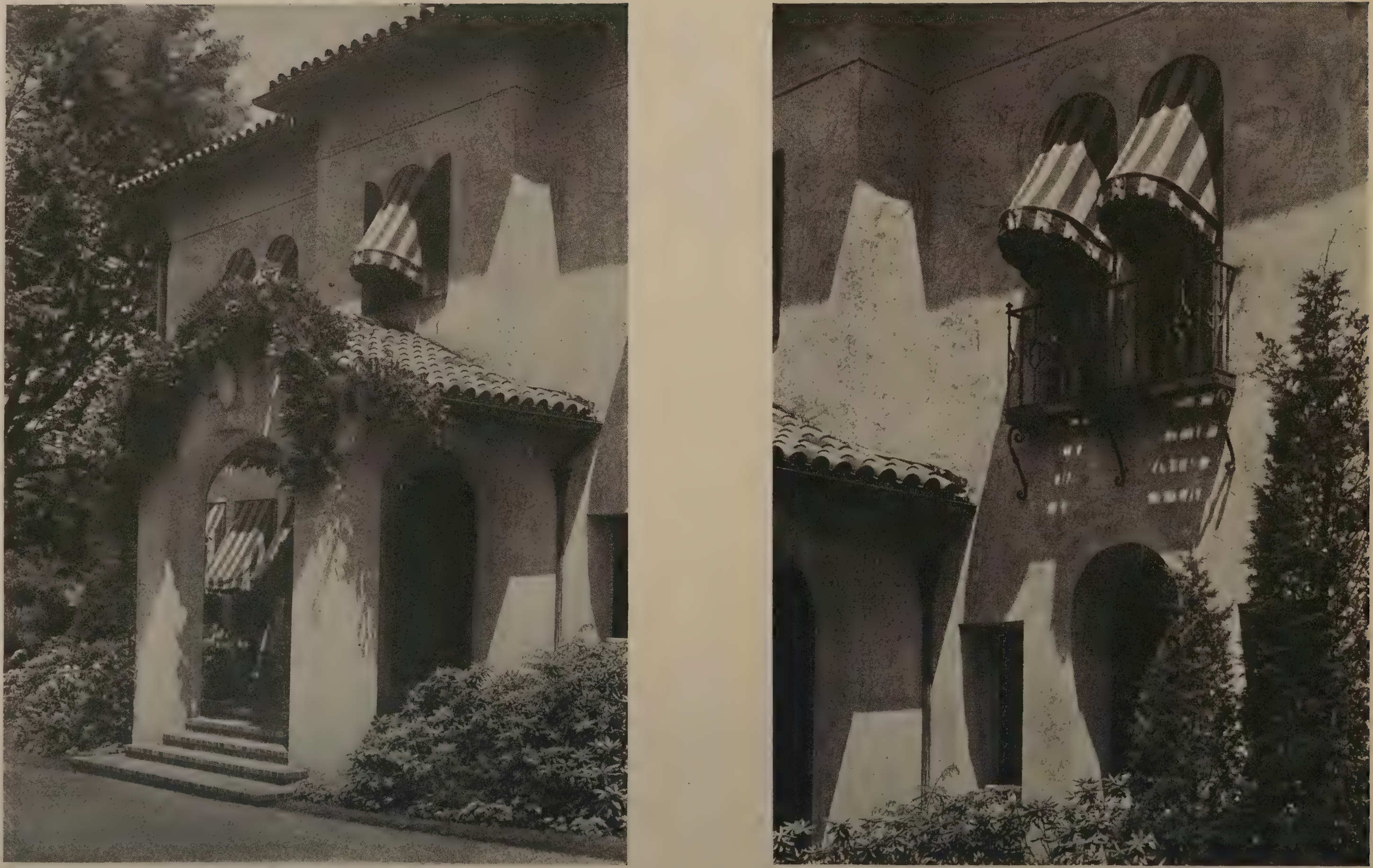
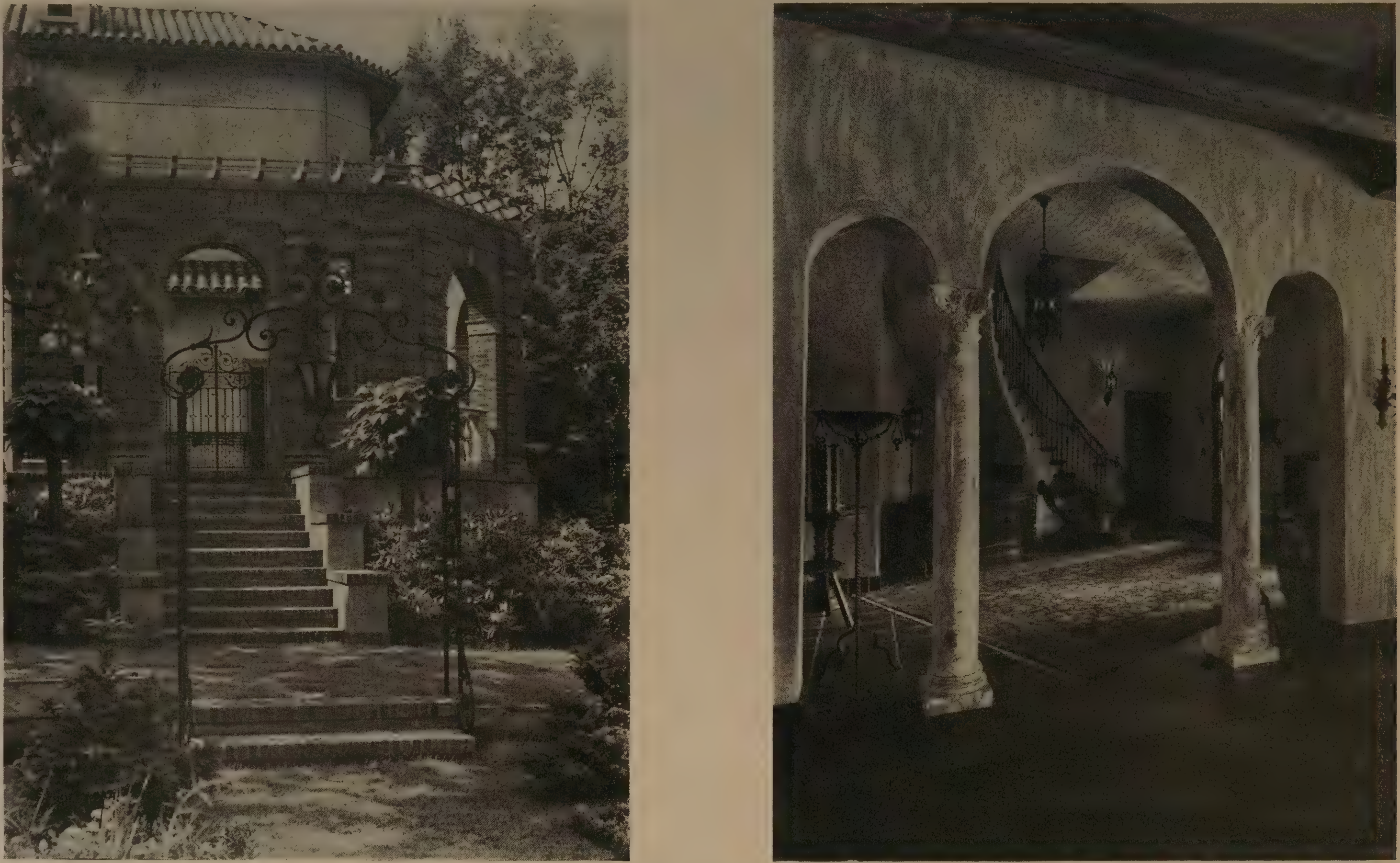


Photo, Amemiya

RESIDENCE OF MICHAEL E. PATERNO, ESQ., IRVINGTON, N. Y.
Rosario Candela, Architect



Photo, Amemiya

November, 1926

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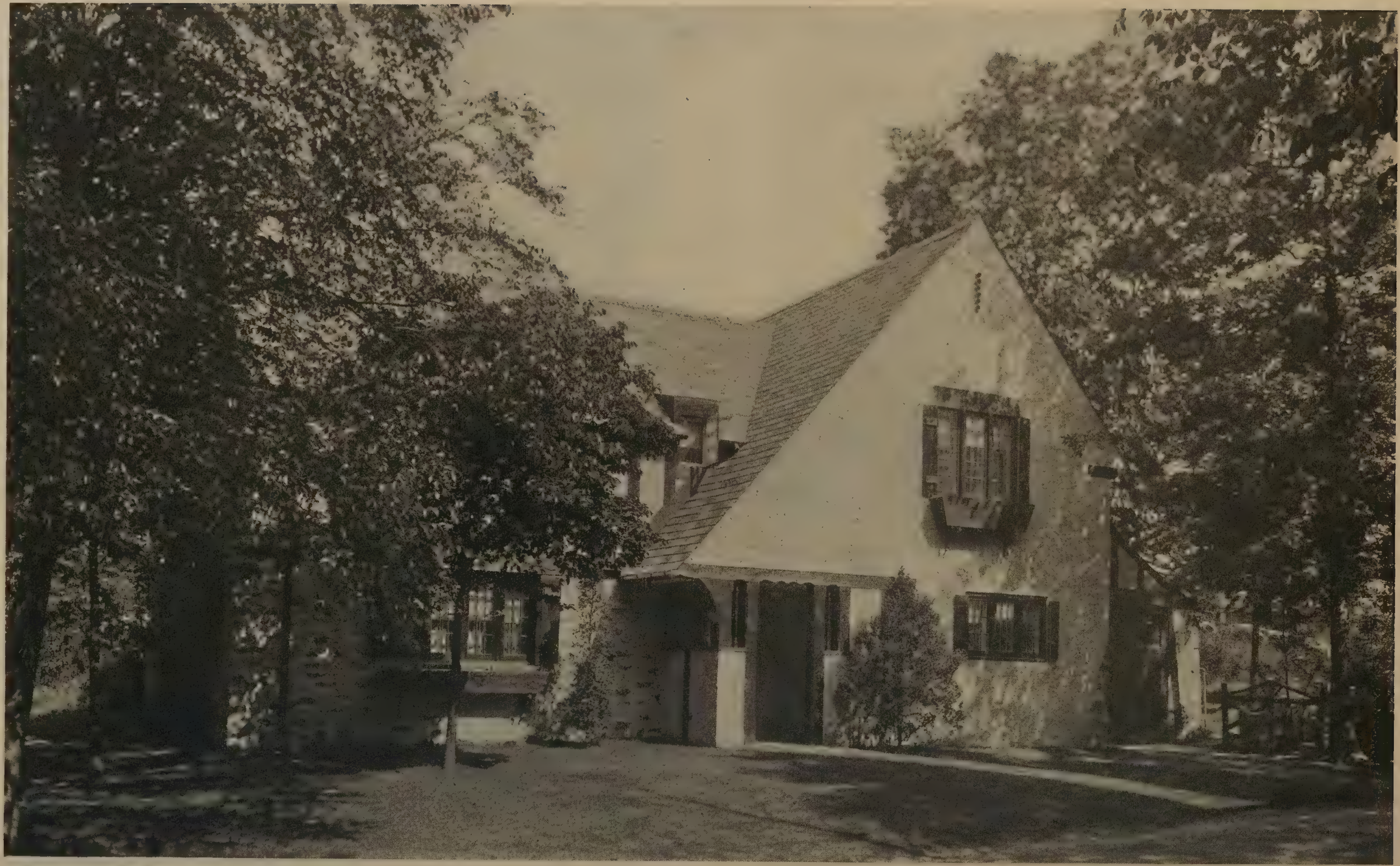
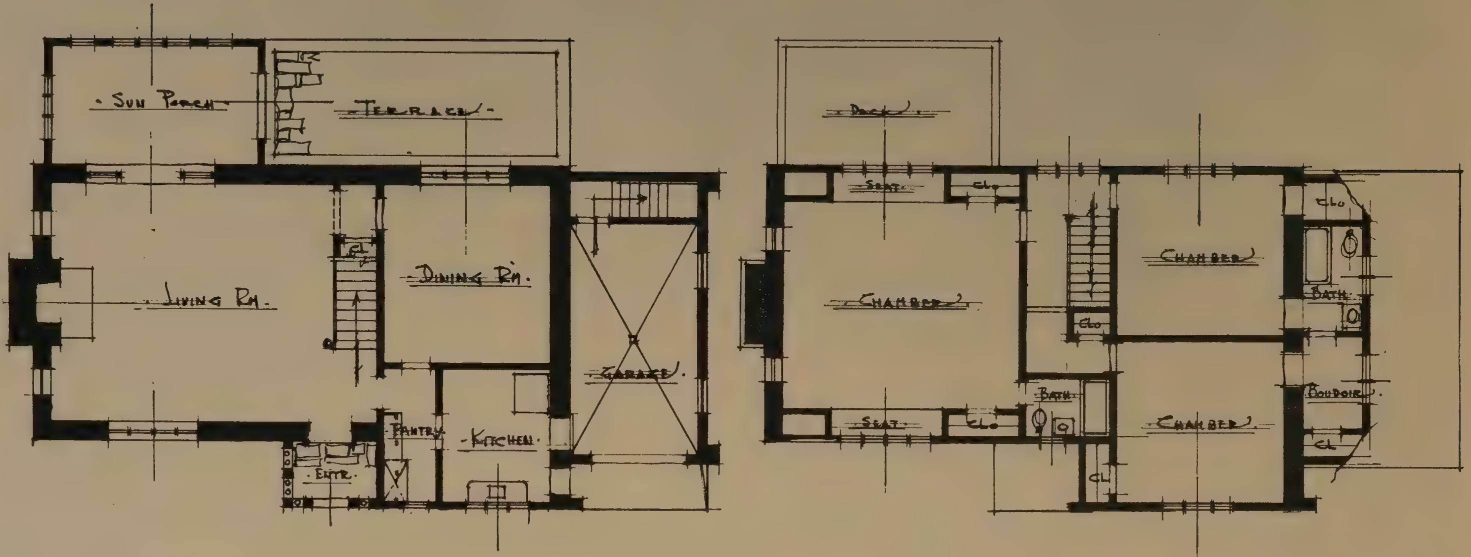


RESIDENCE OF W. S. SCHOENTHALER, ESQ., BRONXVILLE, N. Y.
D. A. Sumno, Architect

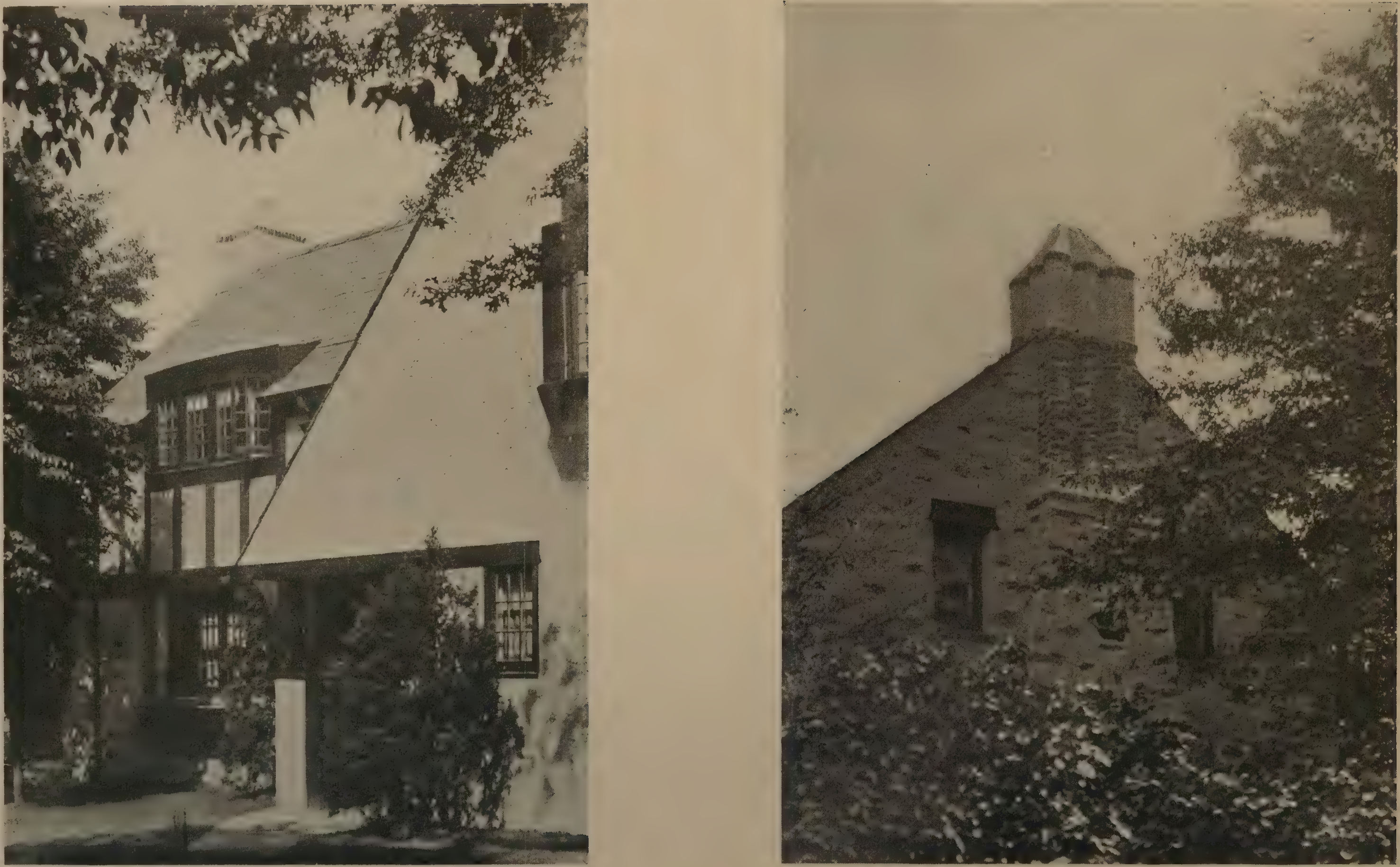


- First Floor.

- Second Floor.

RESIDENCE OF W. S. SCHOENTHALER, ESQ., BRONXVILLE, N. Y

D. A. Sumno, Architect



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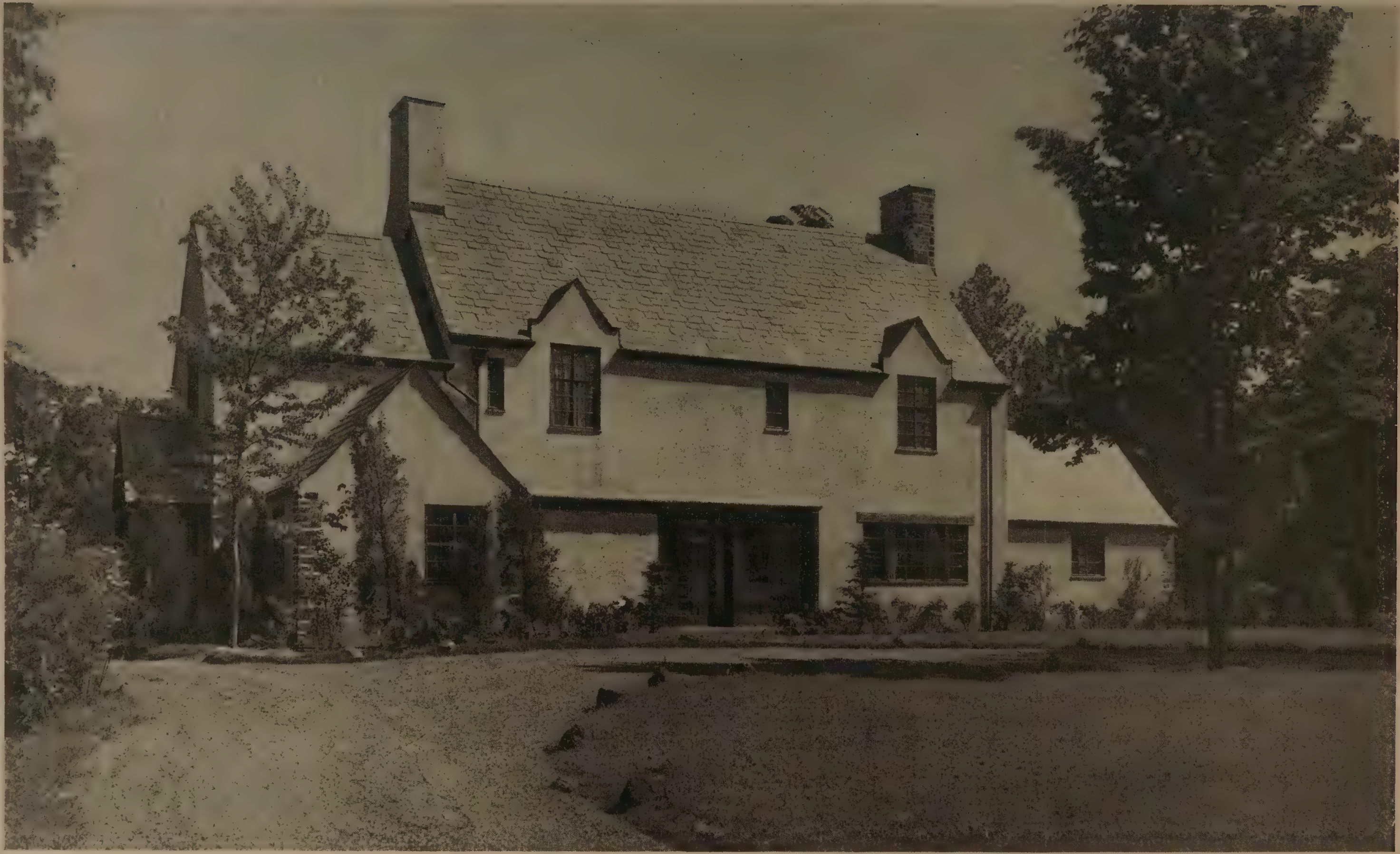
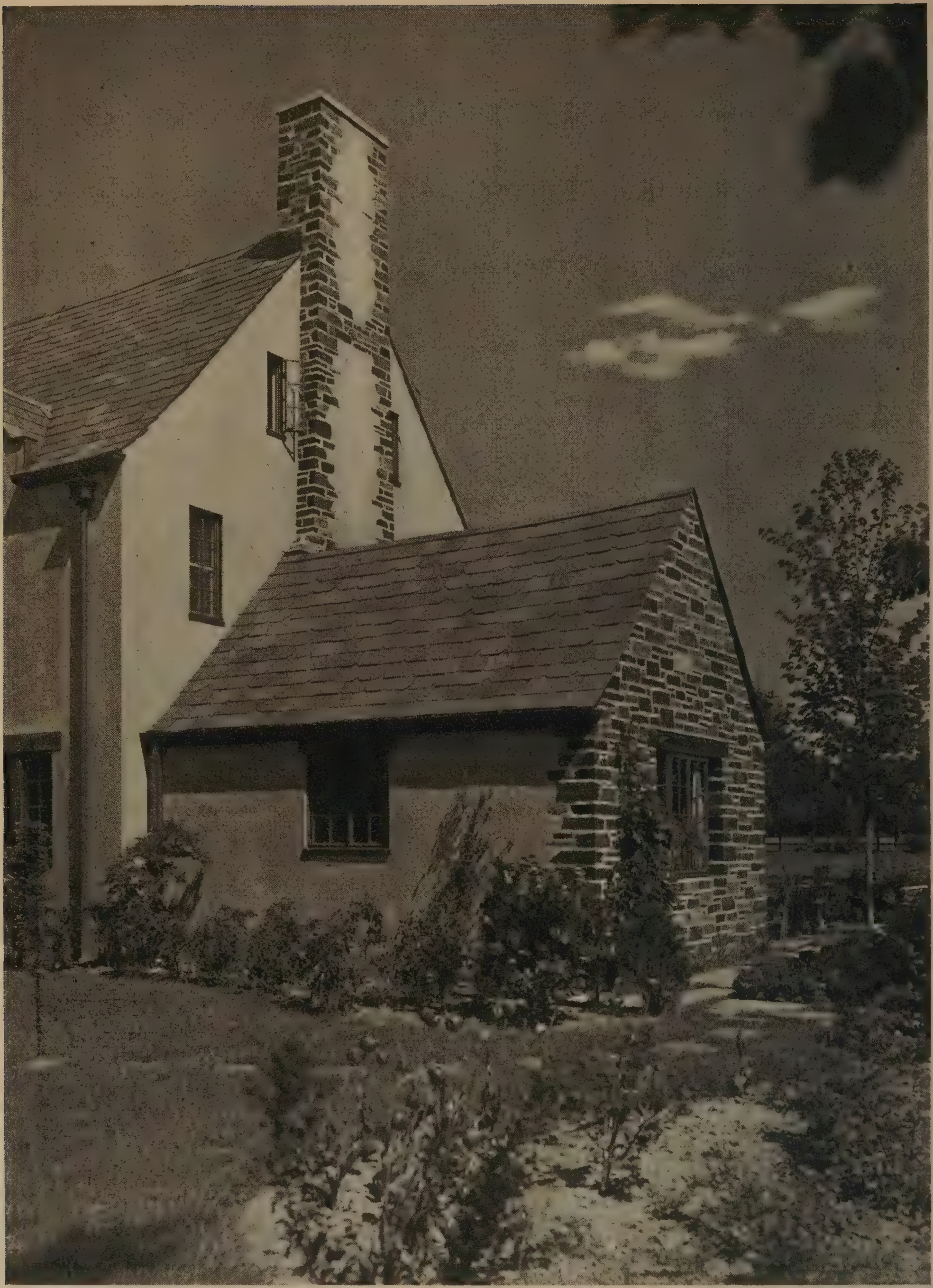


Photo, Amemiya

November, 1926

RESIDENCE OF HUGH McNAIR KAHLER, ESQ., PRINCETON, N. J.
Aymar Embury II, Architect



Photo, Amemiya

November, 1926

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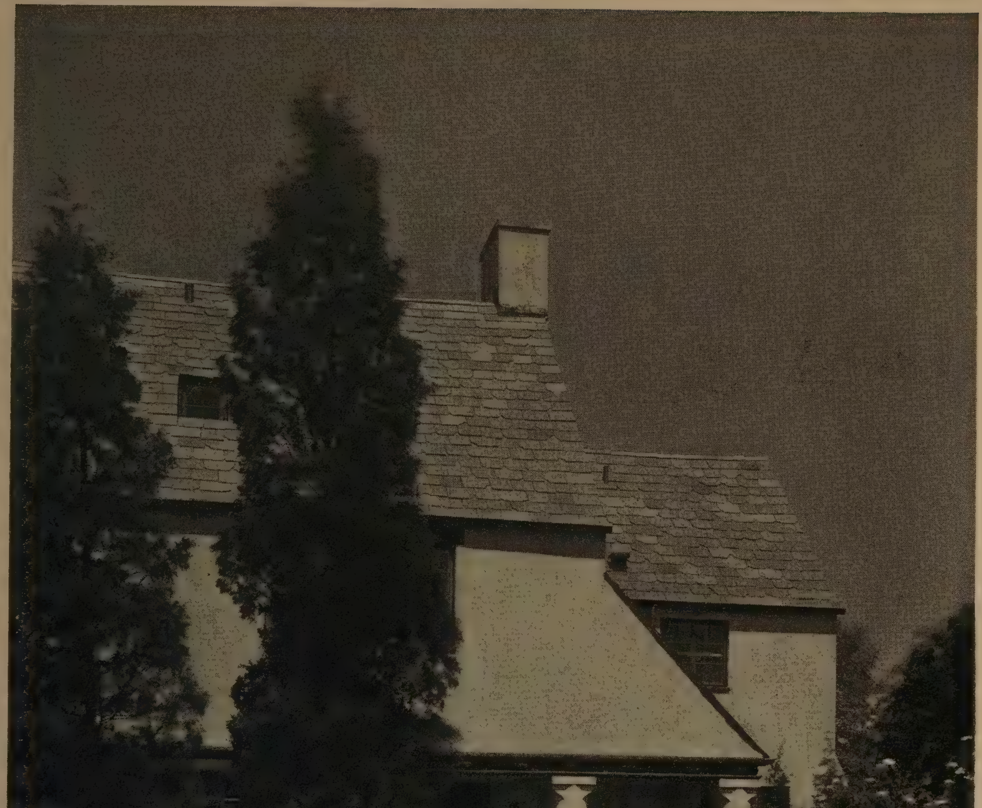
Aymar Embury II, Architect



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November, 1926

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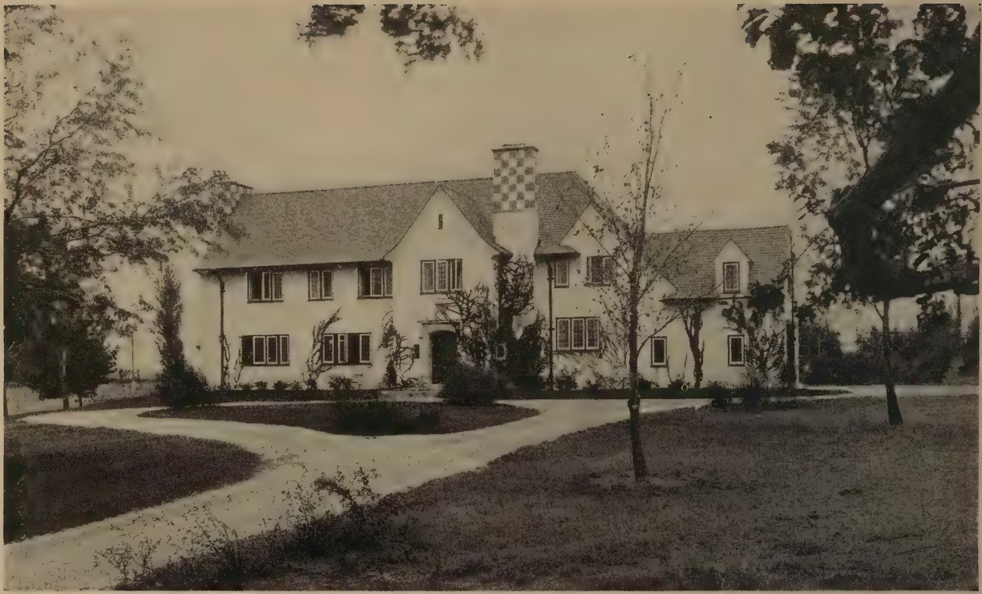
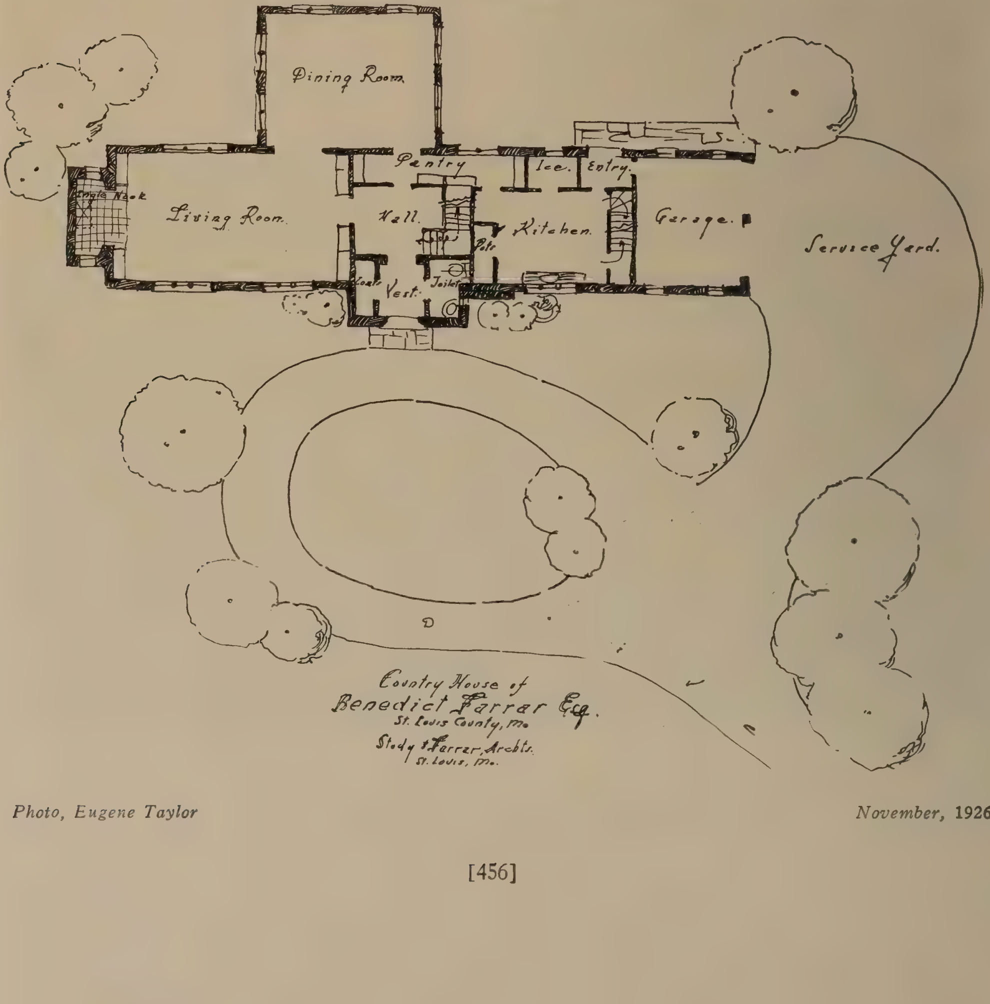
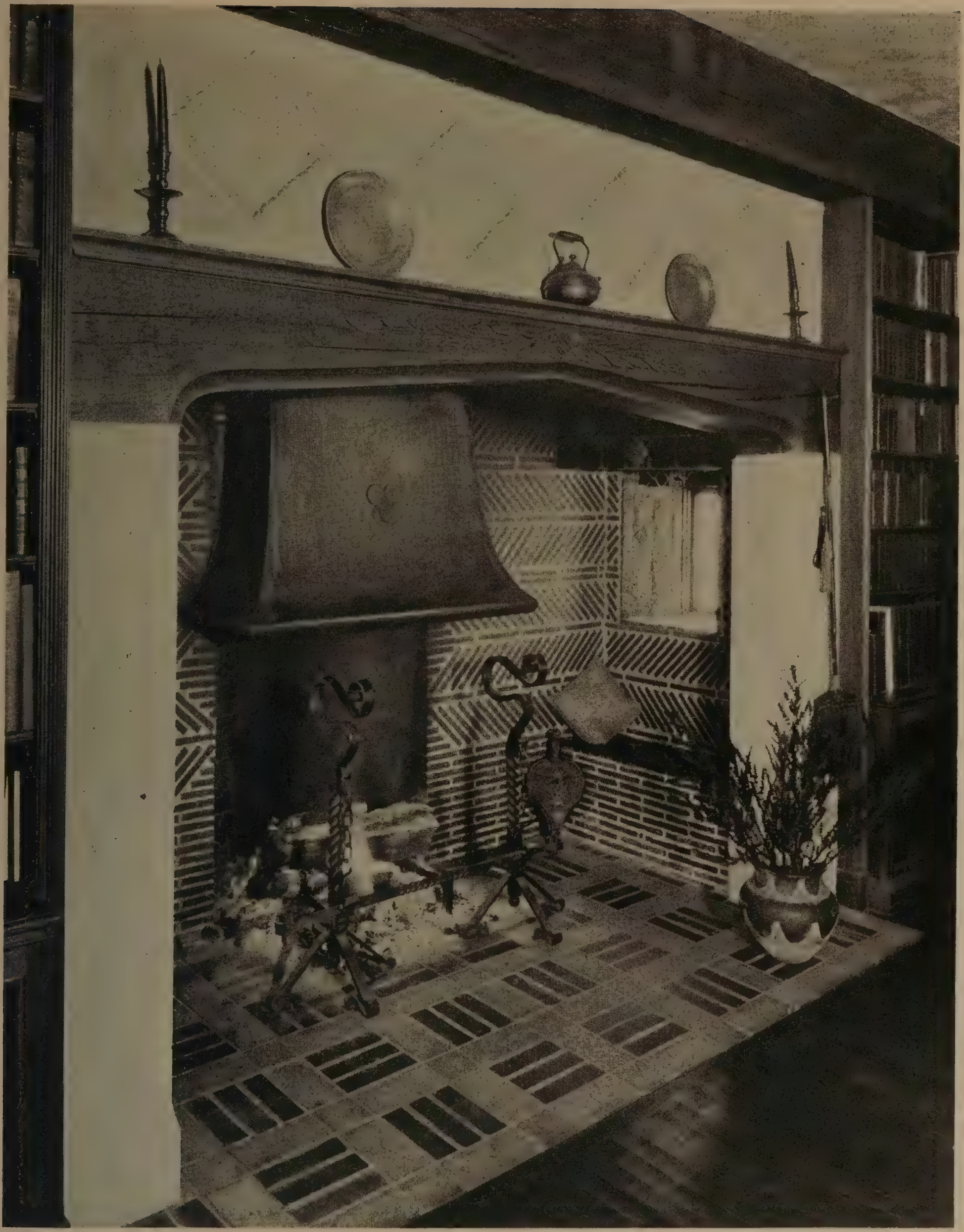




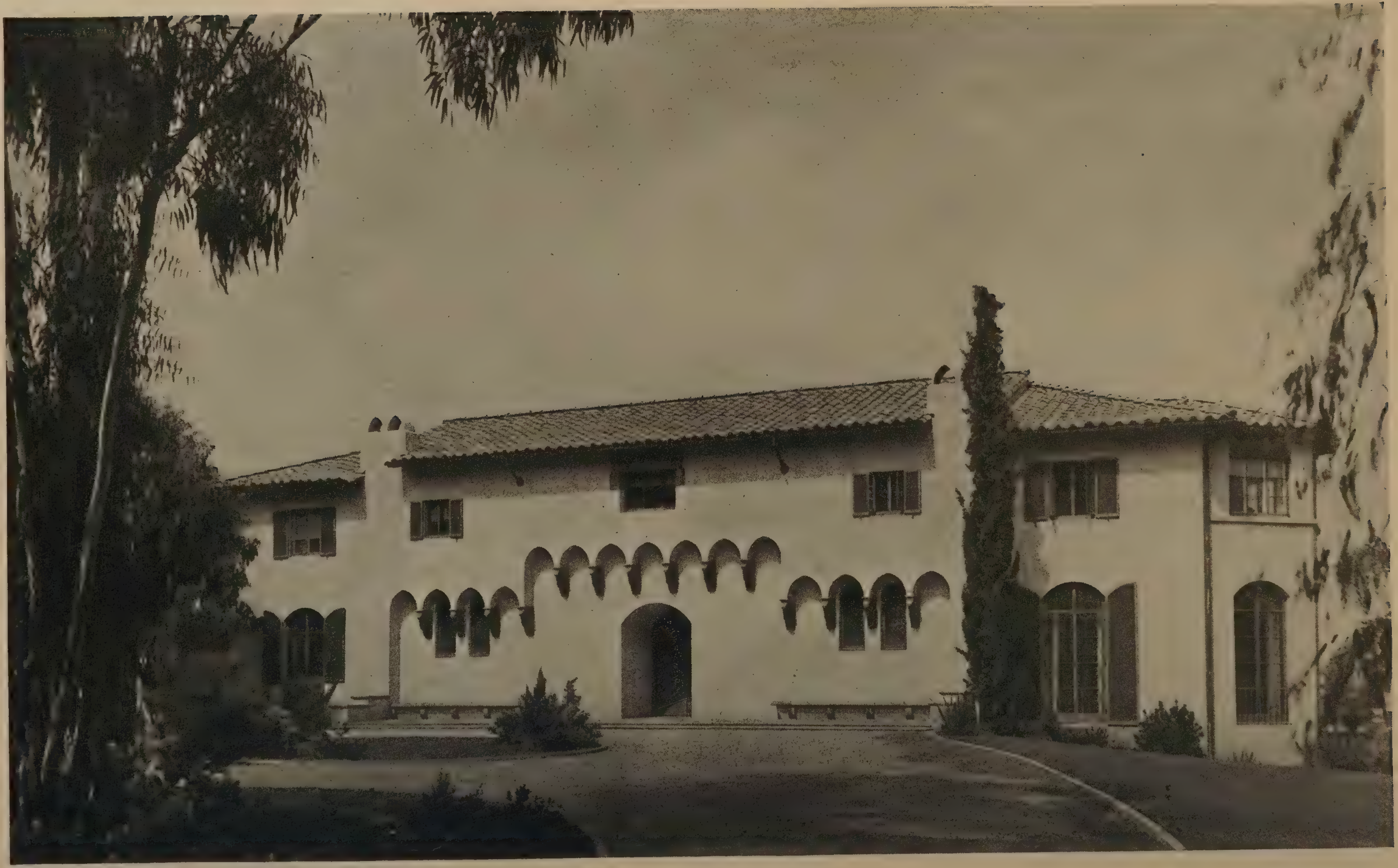
Photo, Eugene Taylor

November, 1926



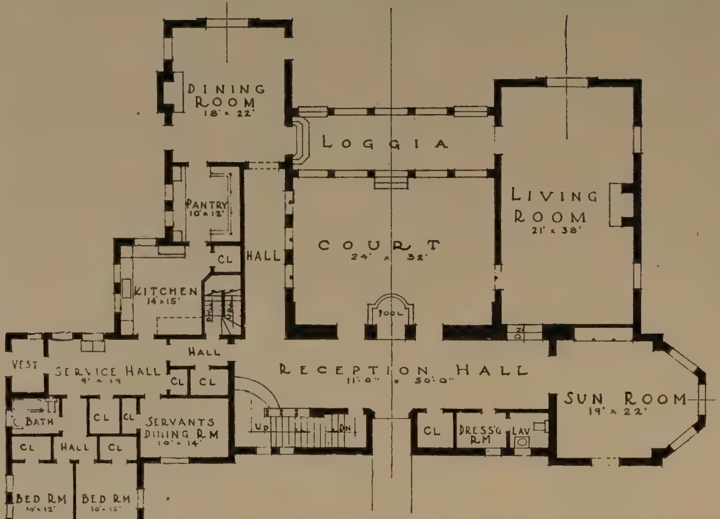
Photo, Eugene Taylor *November, 1926*

COUNTRY HOUSE OF BENEDICT FARRAR, ESQ., ST. LOUIS COUNTY, MO.
Study & Farrar, Architects

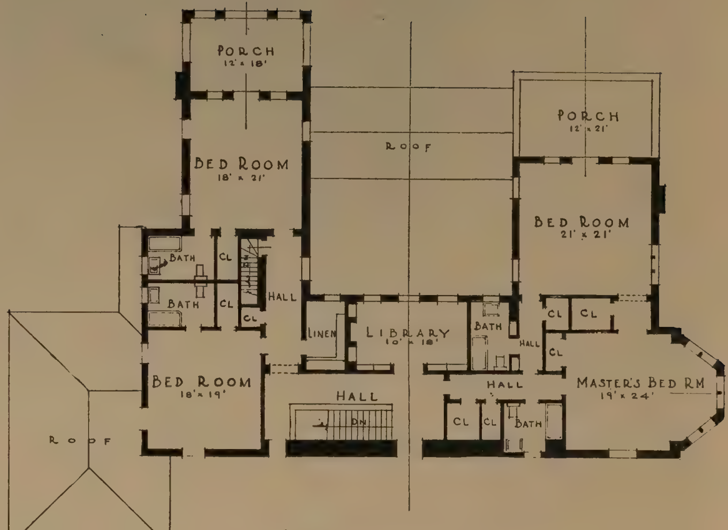


Photo, George Haight

RESIDENCE OF W. W. STEPHENS, ESQ., PASADENA, CALIFORNIA
Marston, Van Pelt & Maybury, Architects

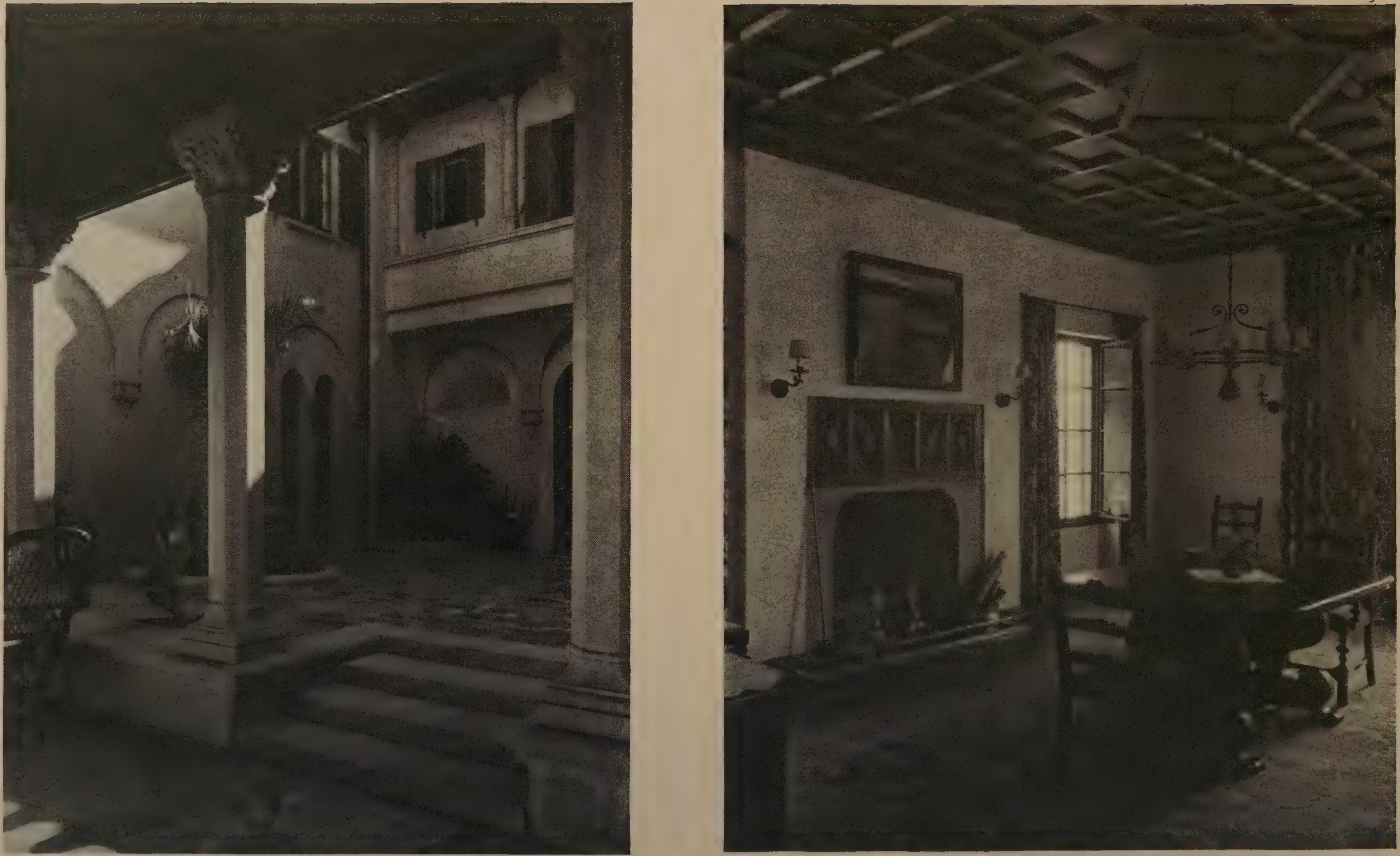


FIRST FLOOR PLAN



SECOND FLOOR PLAN

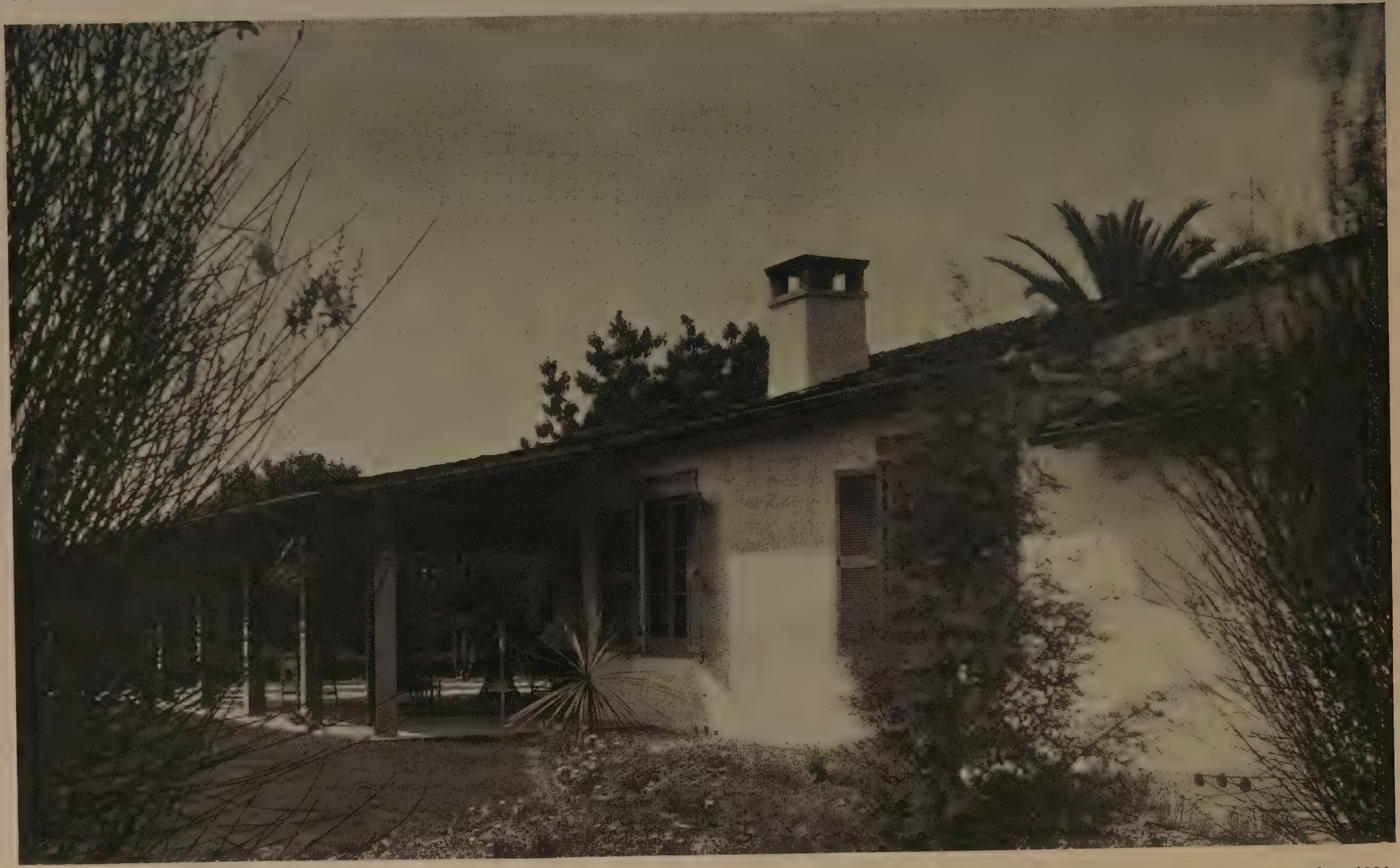
RESIDENCE OF W. W. STEPHENS, ESQ., PASADENA, CALIFORNIA
Marston, Van Pelt & Maybury, Architects



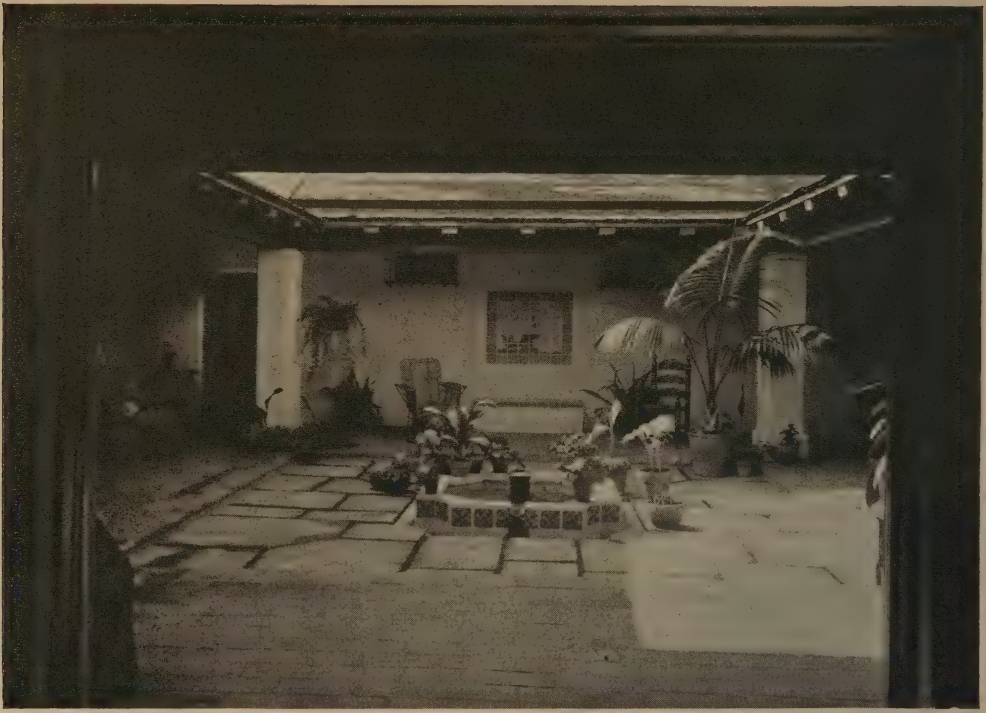
Photo, George Haight

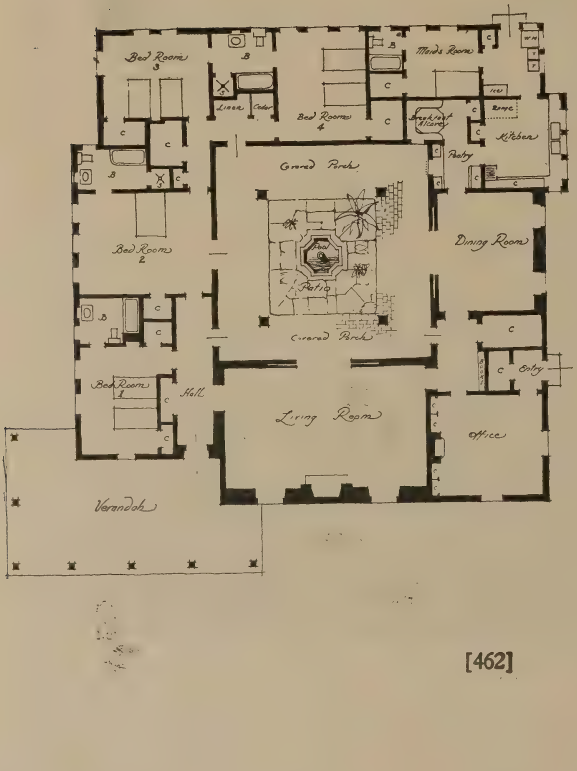
November, 1926

RESIDENCE OF W. W. STEPHENS, ESQ., PASADENA, CALIFORNIA
Marston, Van Pelt & Maybury, Architects

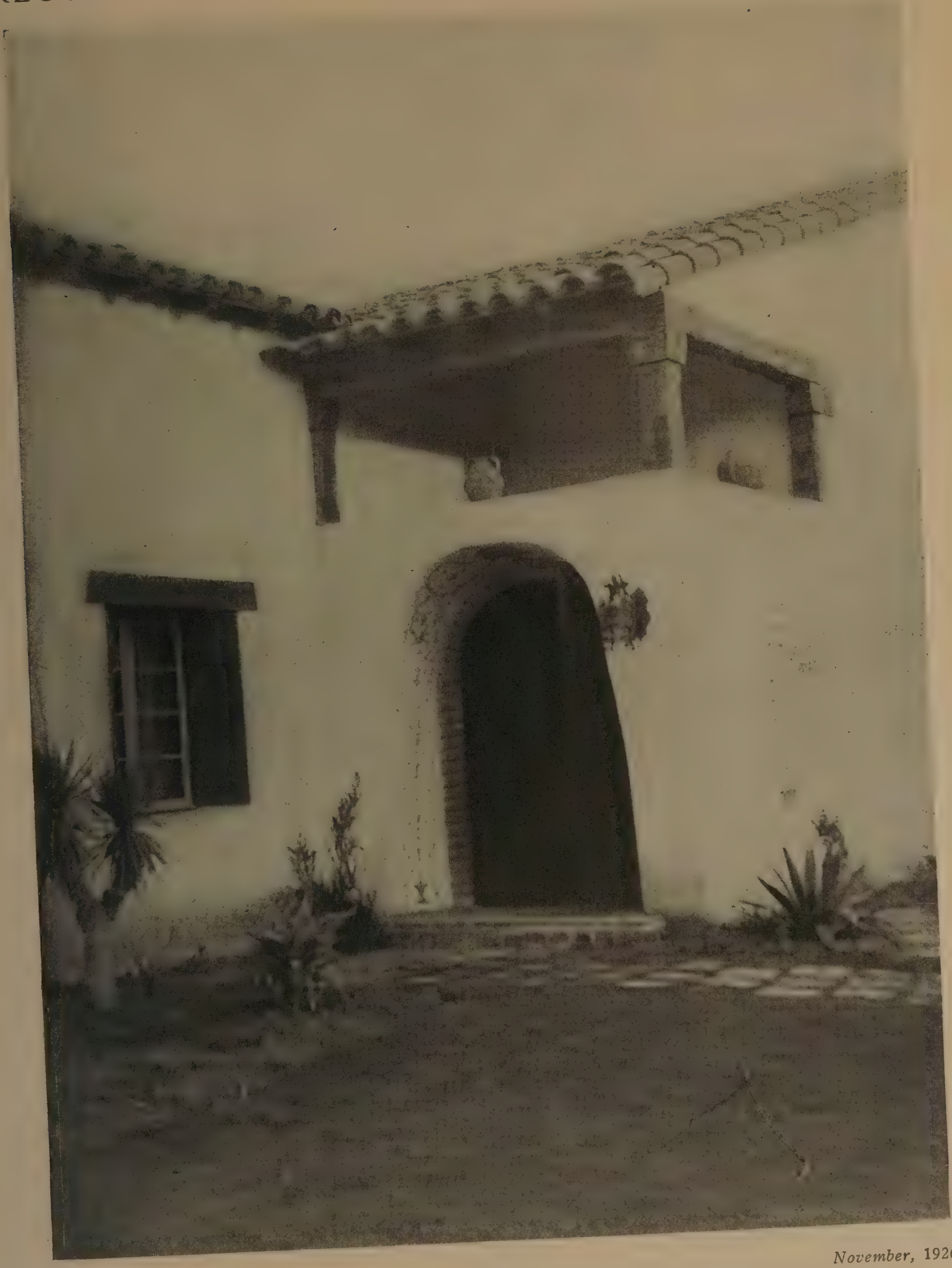


RANCH HOUSE FOR JAMES E. TWEEDY, ESQ., DOWNEY, CALIFORNIA
Roland E. Coate, Architect





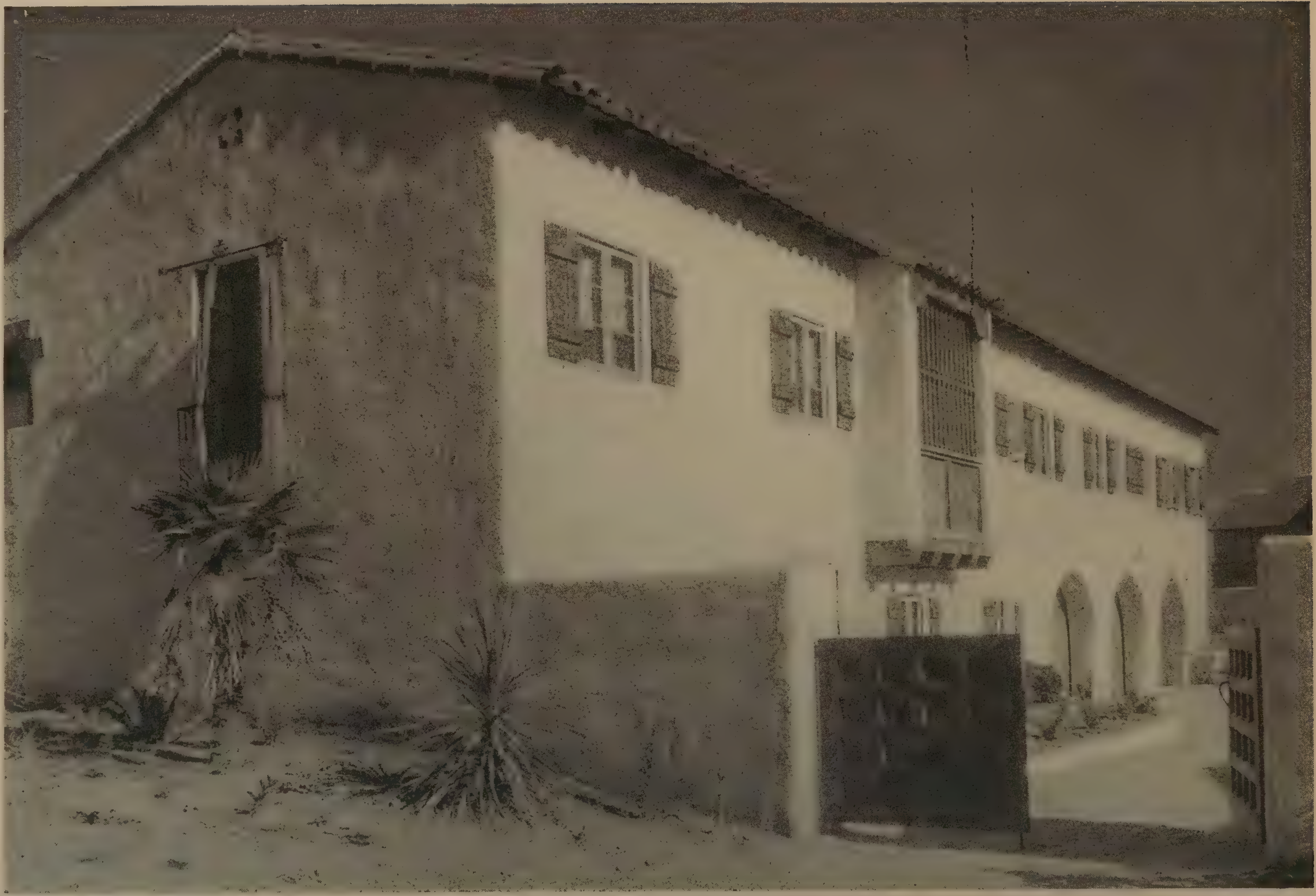
A RANCH HOUSE FOR
JAMES E. TWEEDY, ESQ.
DOWNEY, CALIFORNIA
Roland E. Coate
Architect



November, 1926

Photo, Margaret Craig

RESIDENCE OF R. E. OVERELL, ESQ., BEVERLY HILLS, CALIFORNIA
David Malcolm Mason, Architect



Photo, Margaret Craig

November, 1926

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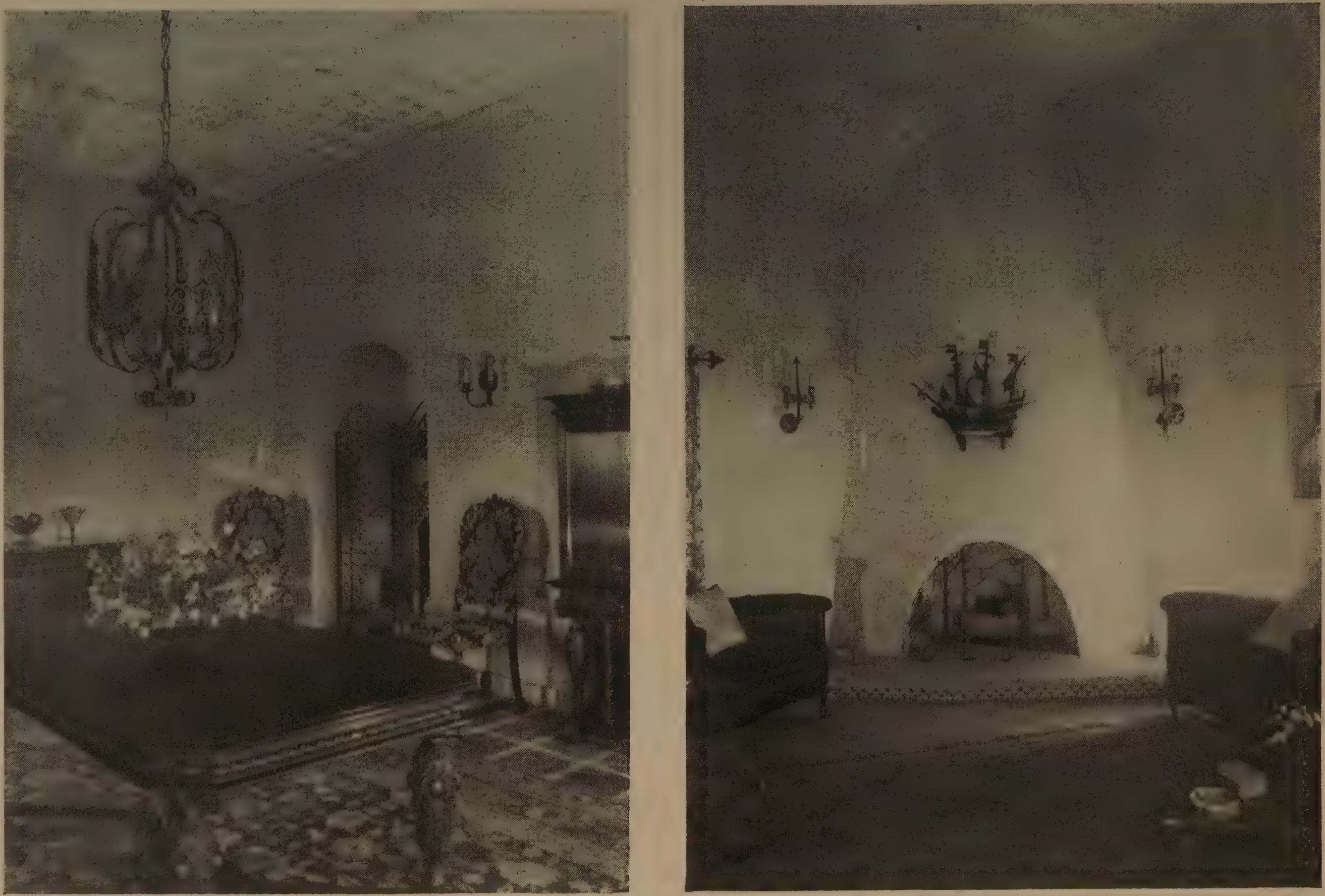

Photo, Margaret Craig

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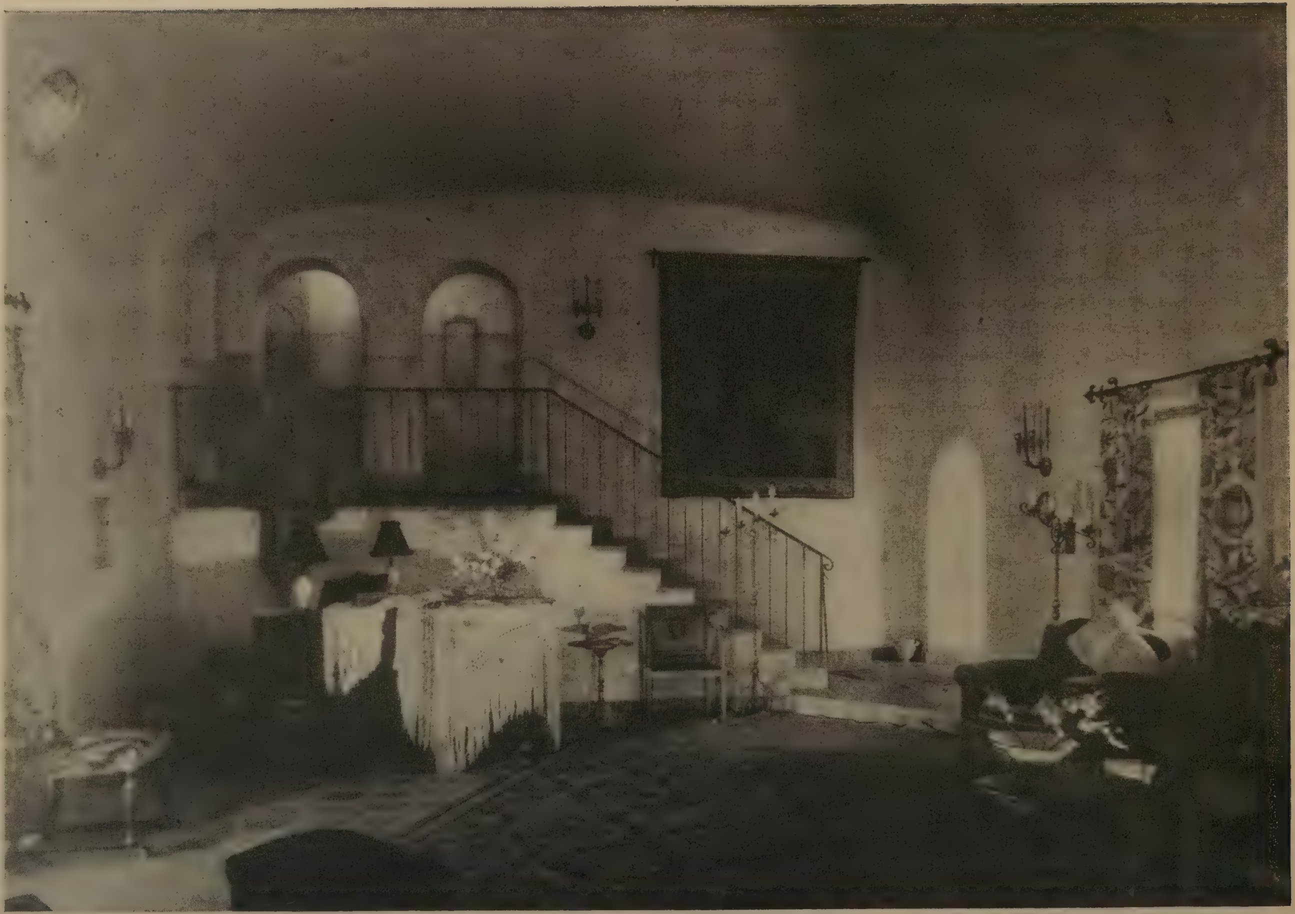

Photo, Margaret Craig

November, 1926

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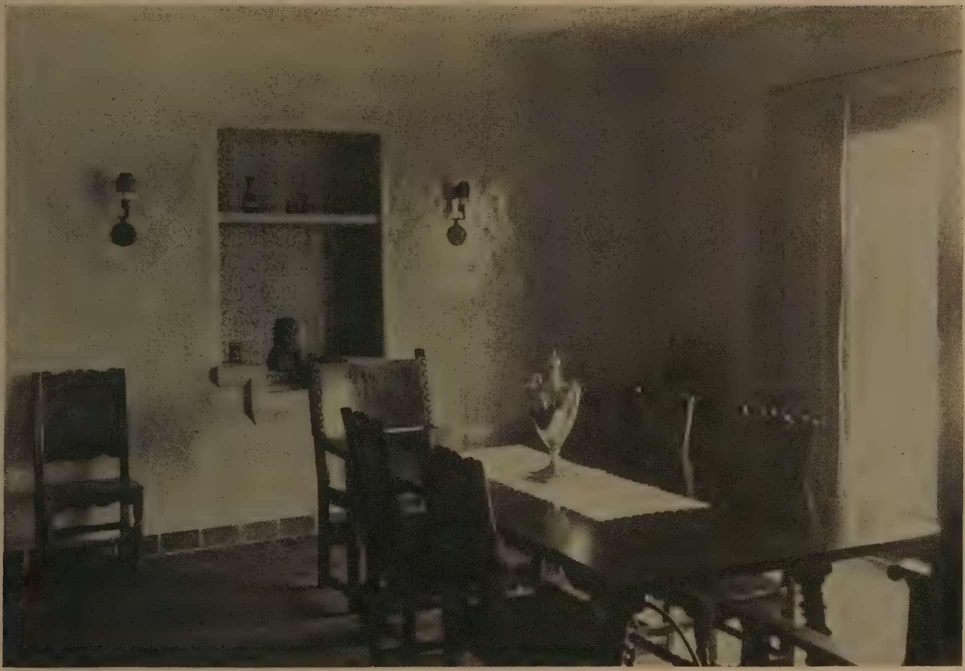
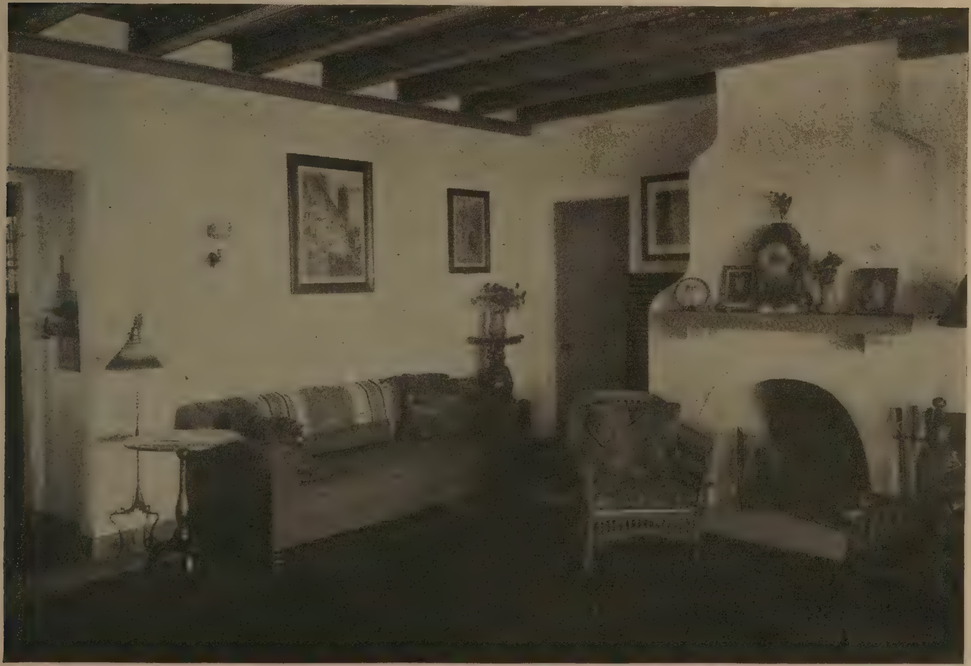
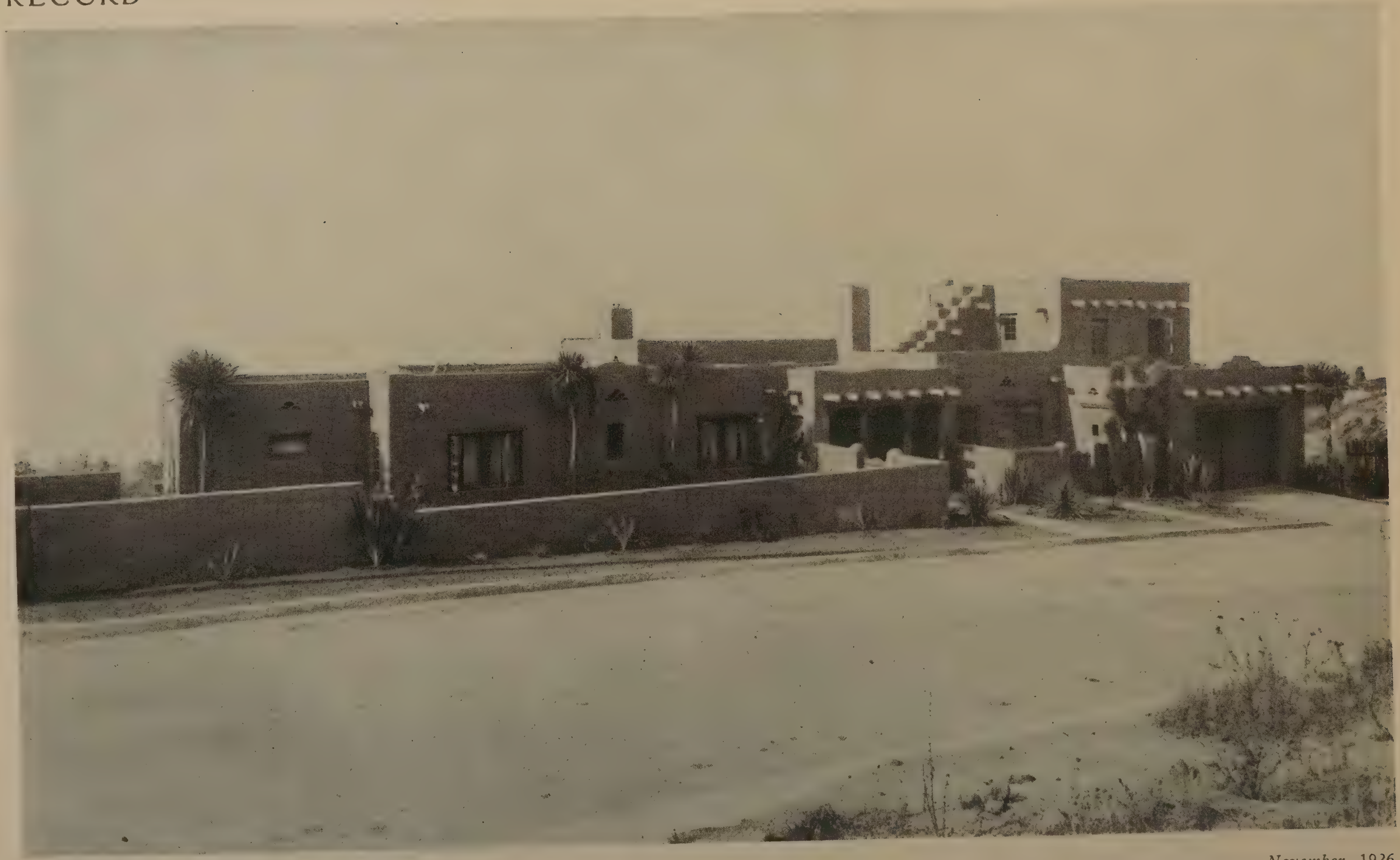


RESIDENCE OF HENRY LIPPITT, ESQ., SAN DIEGO, CALIFORNIA
Wm. Templeton Johnson and Wm. Templeton Johnson & Robert W. Snyder, Architects.



RESIDENCE OF MRS. ARTHUR BROCK, SAN DIEGO, CALIFORNIA
Wm. Templeton Johnson and Robert W. Snyder, Architects



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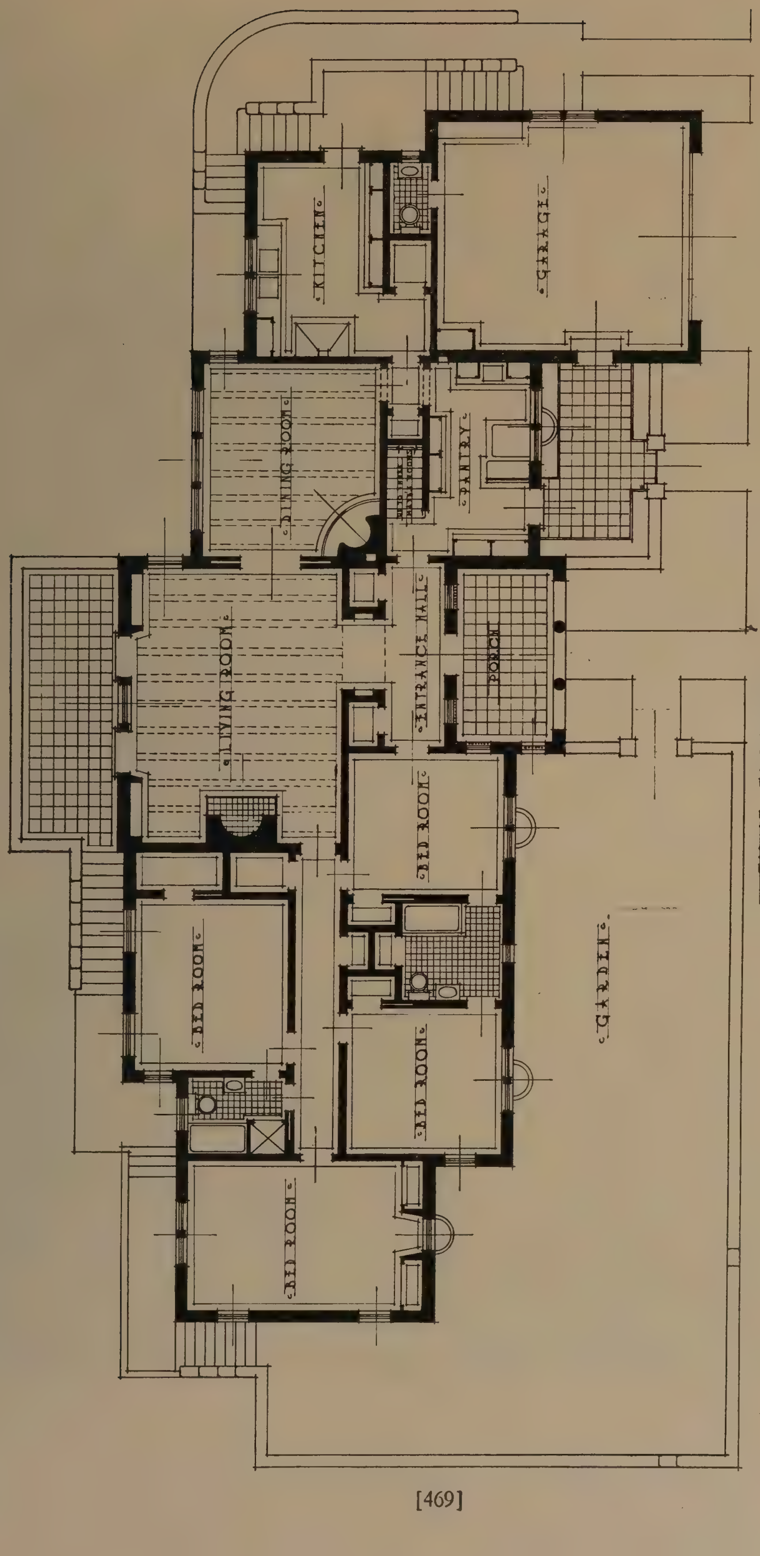
W. Templeton Johnson and Robert W. Snyder, Architects

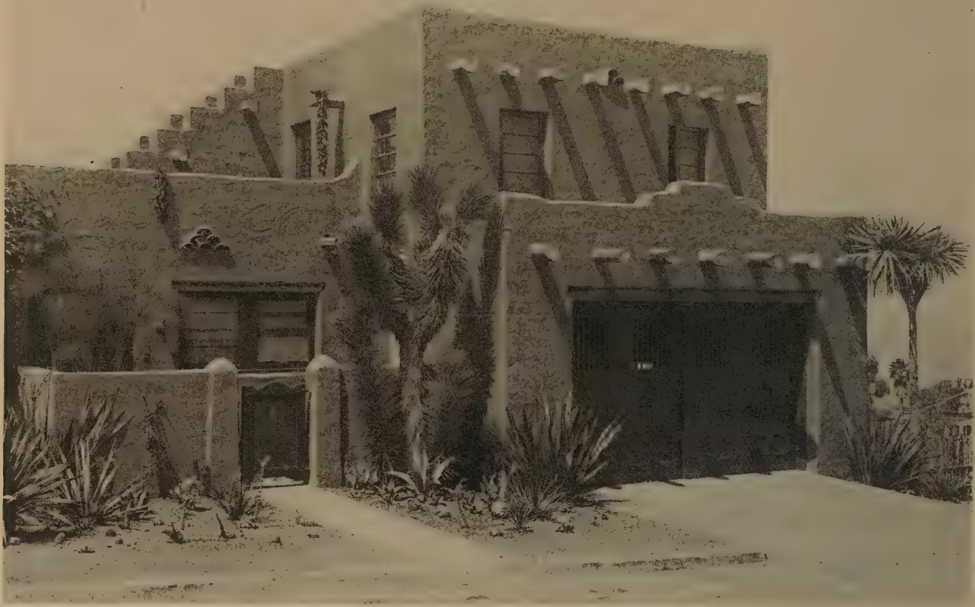


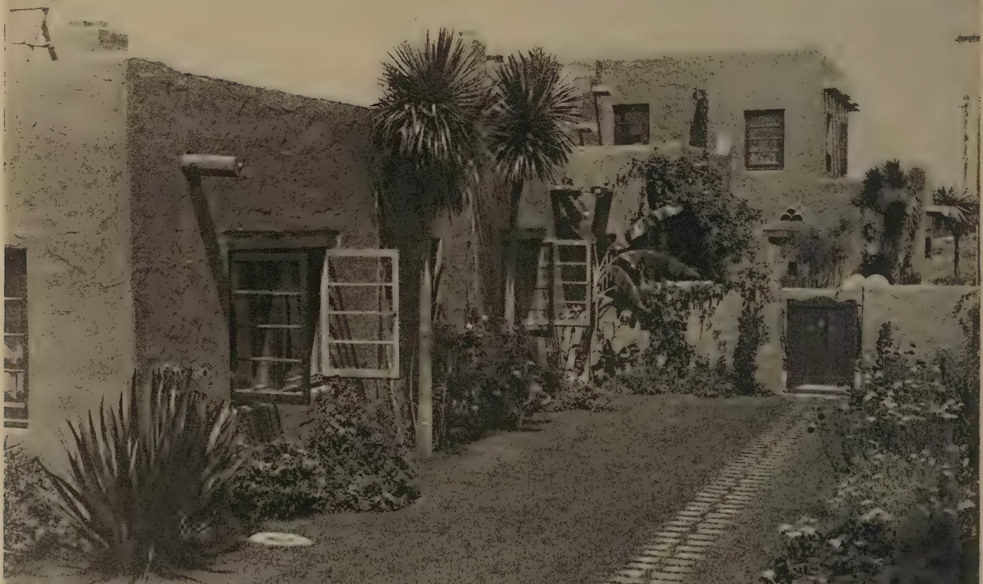
FIRST FLOOR PLAN

RESIDENCE OF MRS. ARTHUR BROCK

SAN DIEGO, CALIF.

WM. TEMPLETON JOHNSON
ROBERT W. SNYDER
ARCHTS.
SAN DIEGO, CALIF.





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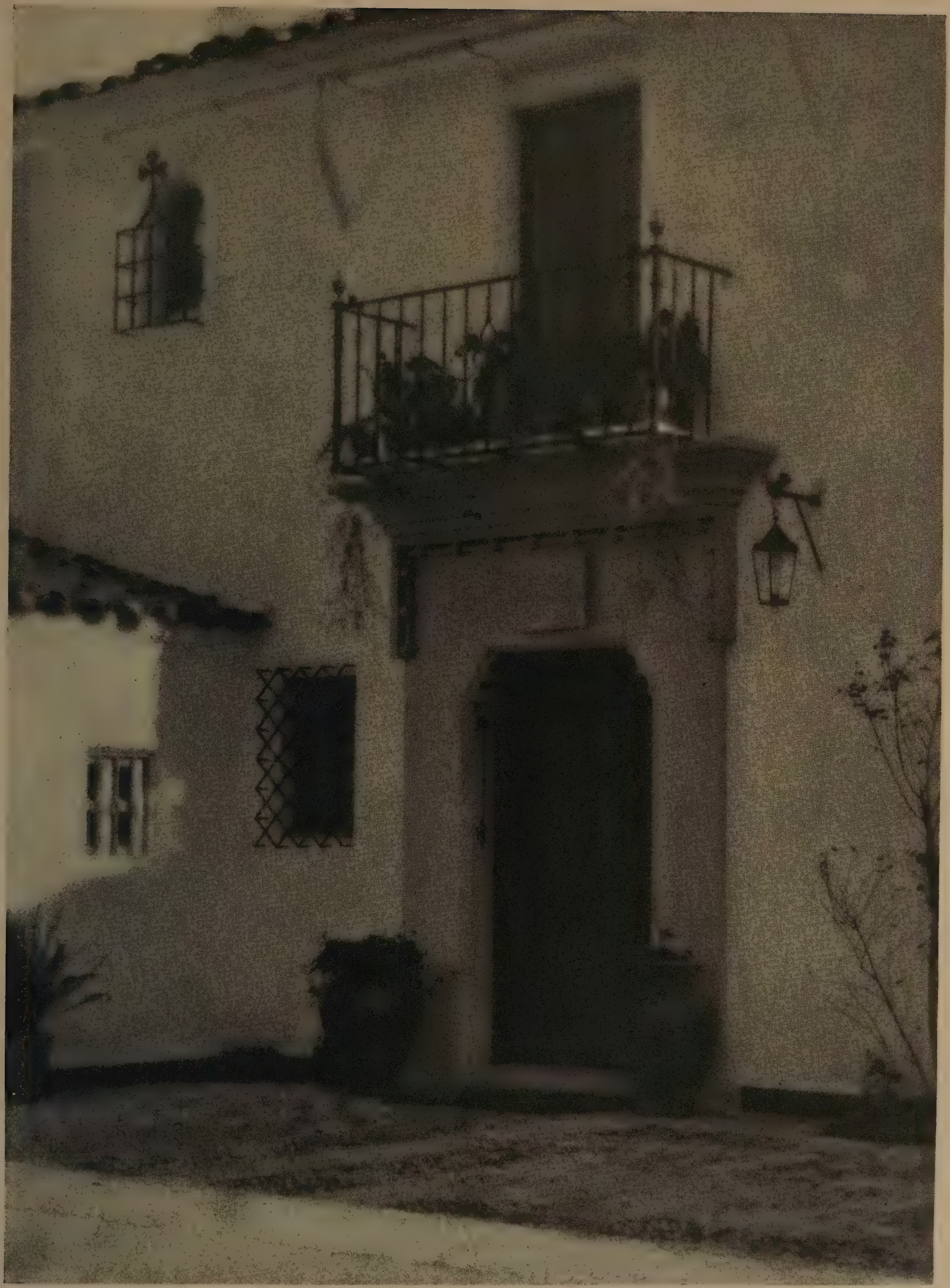
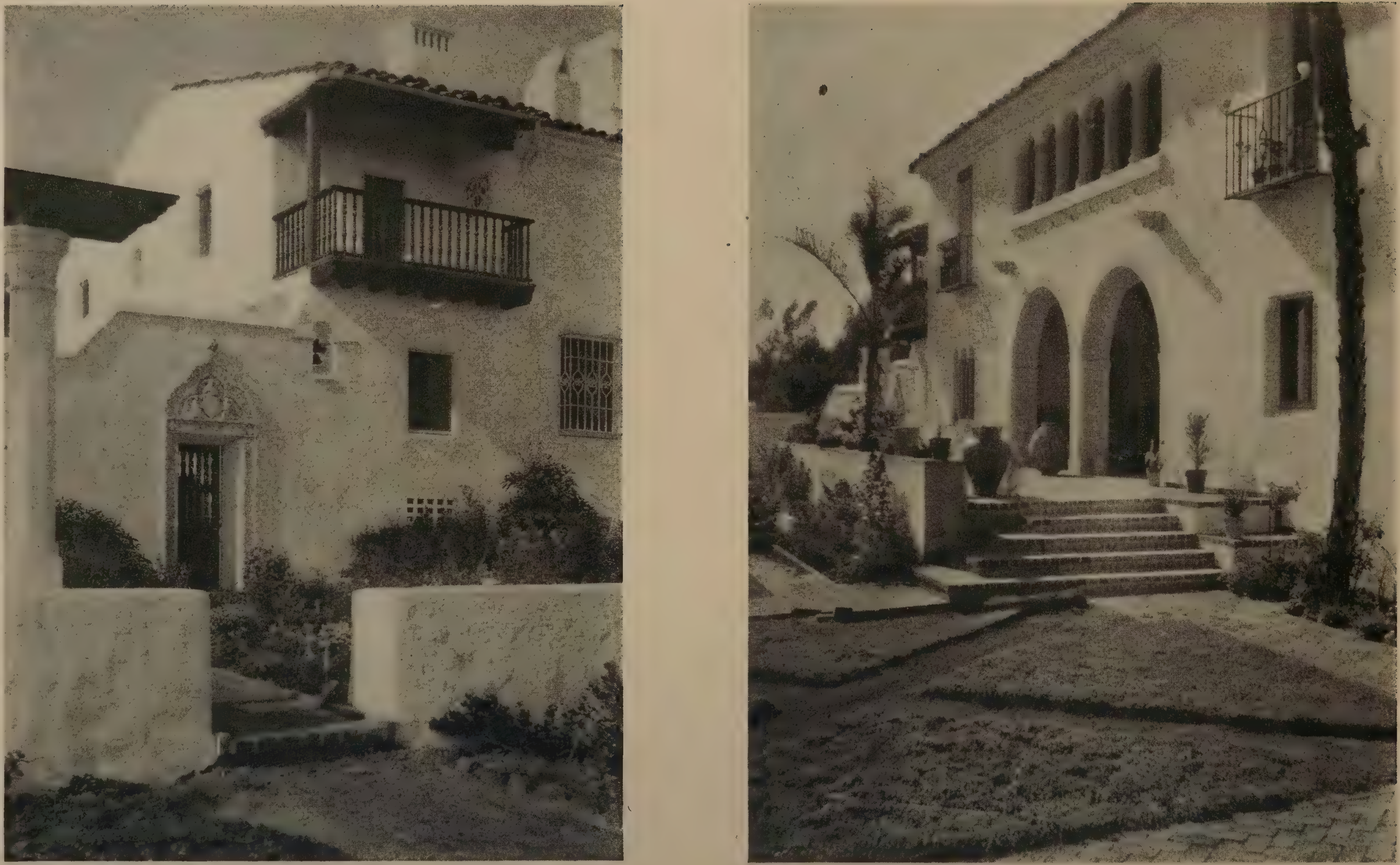
W. Templeton Johnson and Robert W. Snyder, Architects



Photo, J. Walter Collinge *November,* 1926

RESIDENCE OF GEORGE F. STEEDMAN, ESQ., MONTECITO, CALIFORNIA
George Washington Smith, Architect



Photo, J. Walter Collinge

November, 1926

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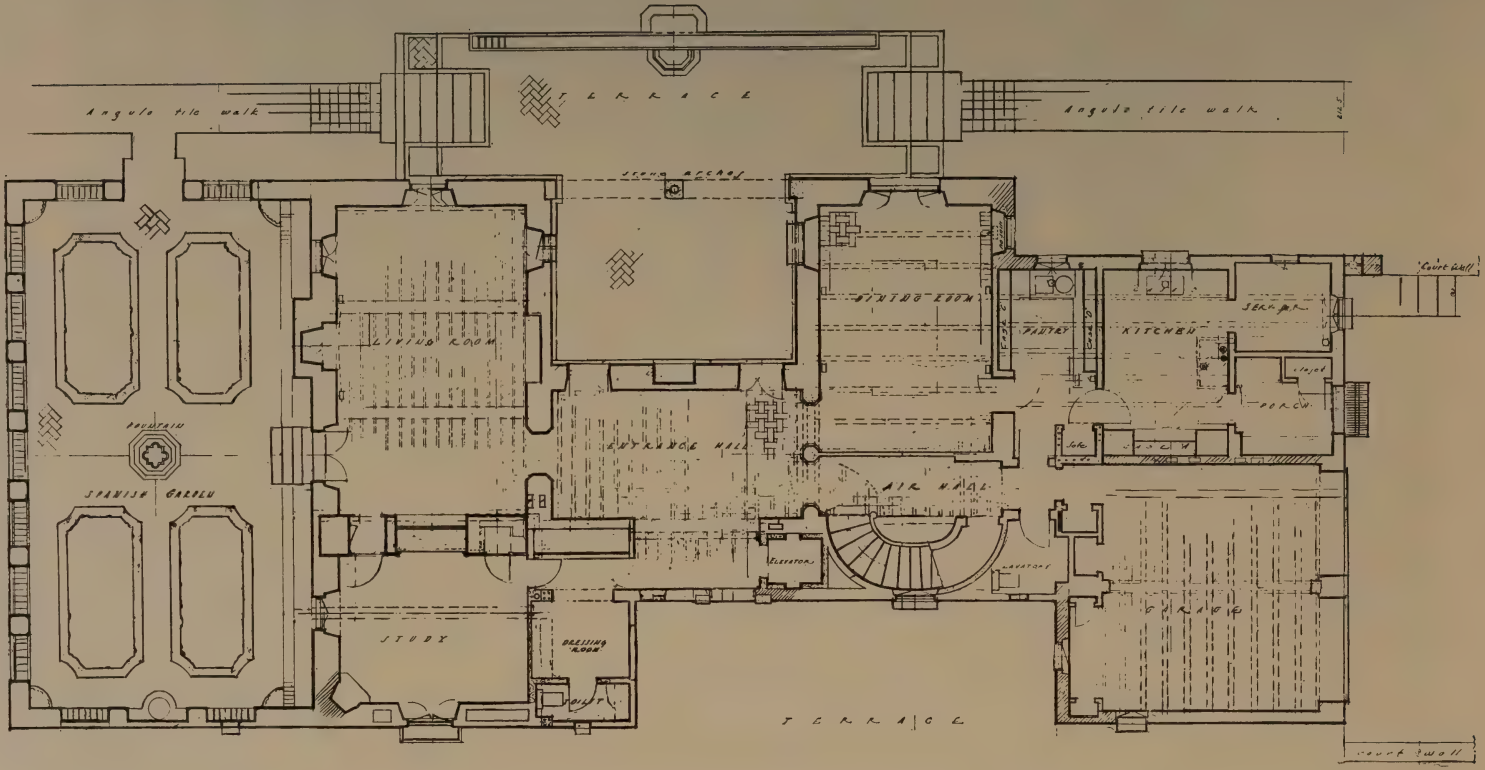

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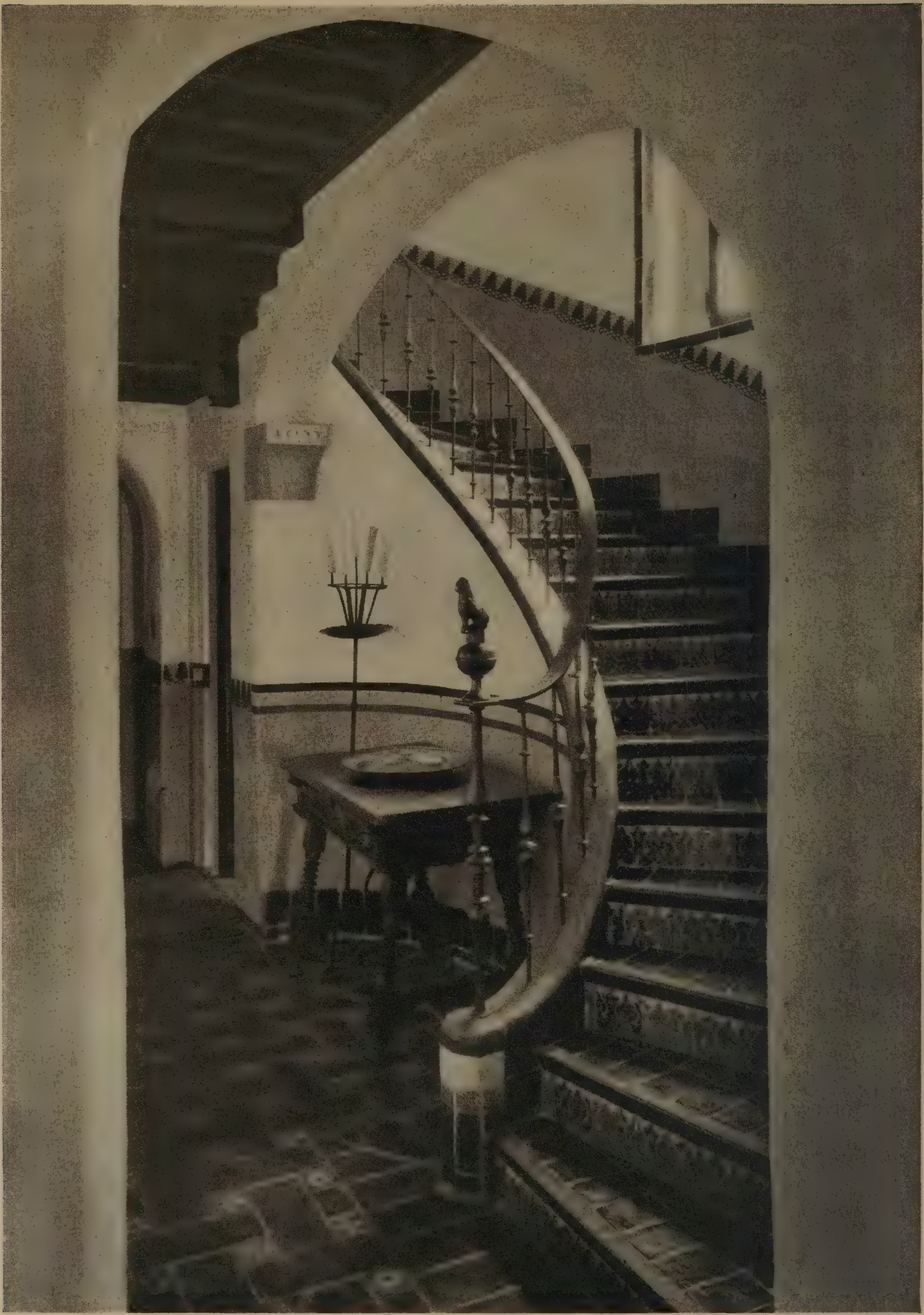

Photo, J. Walter Collinge *November,* 1926

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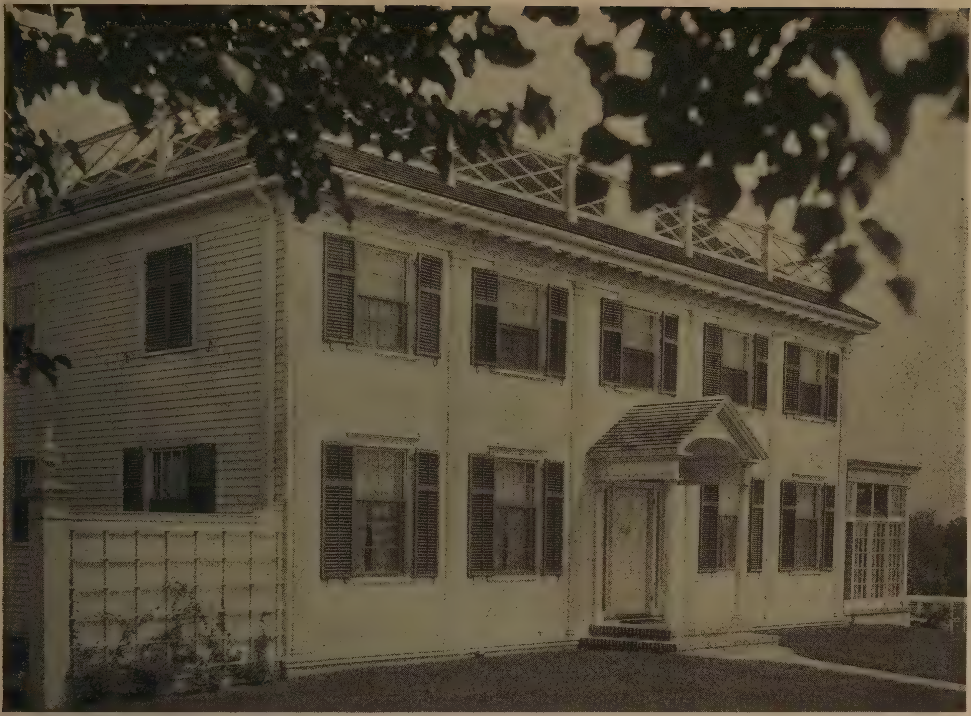
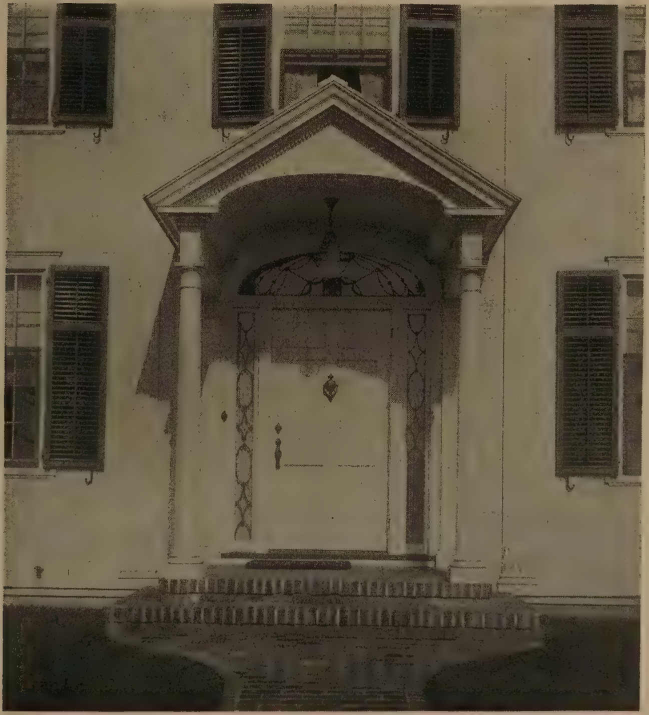
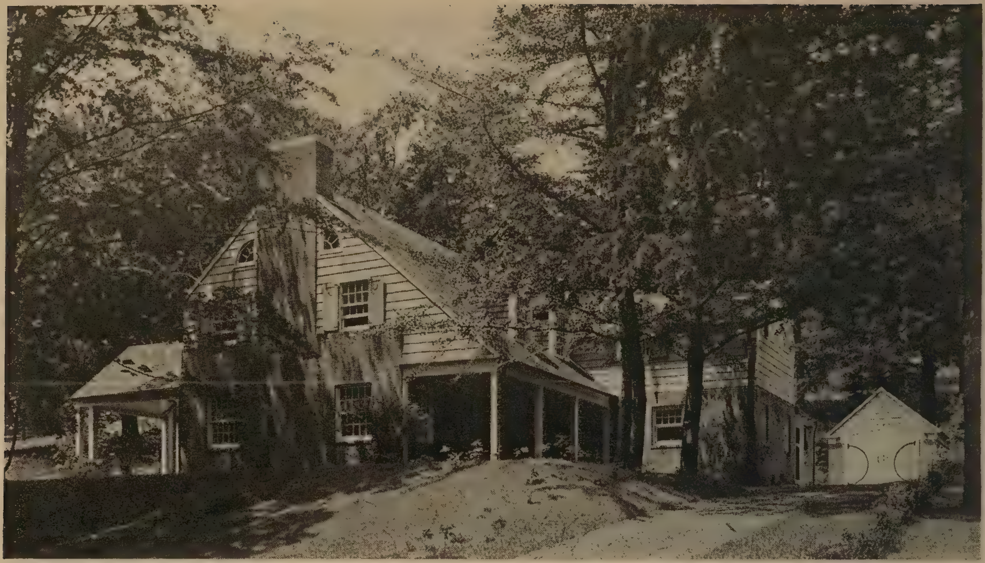
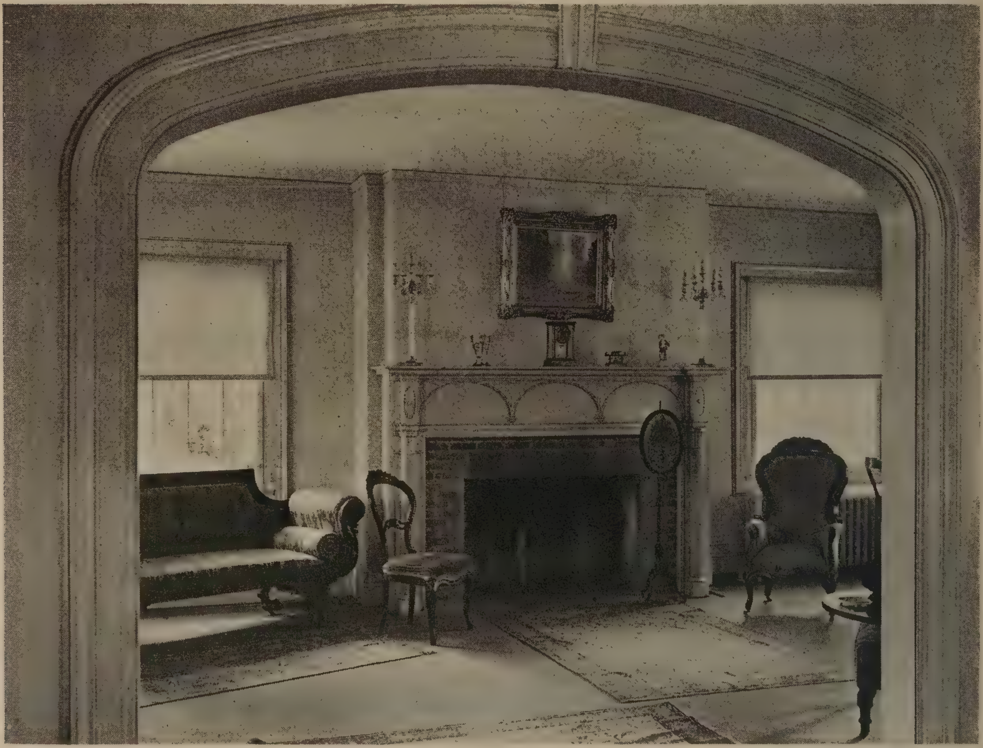
George Washington Smith, Architect





THE RESIDENCE
OF
MRS. GEORGE LEE
NEW LONDON, CONN.
Arthur W. Jackson
Architect

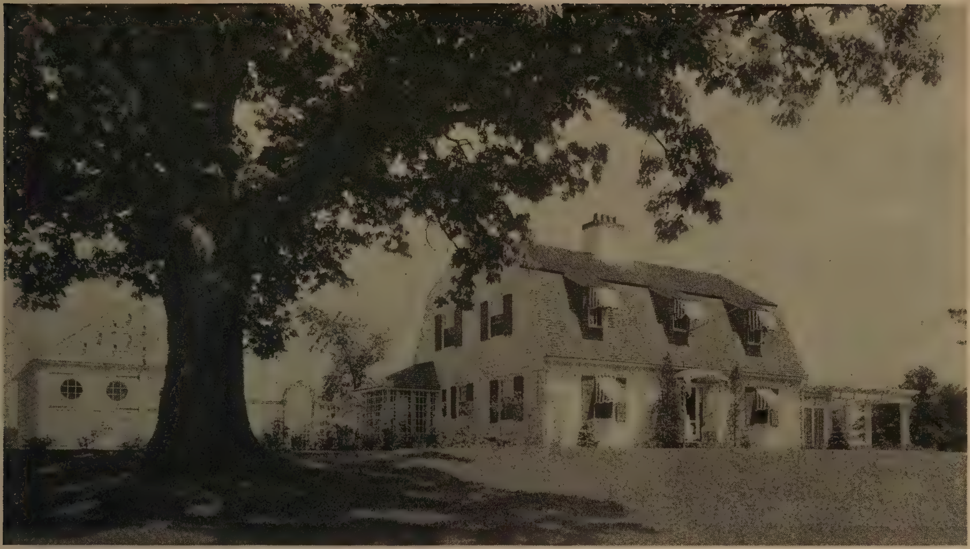


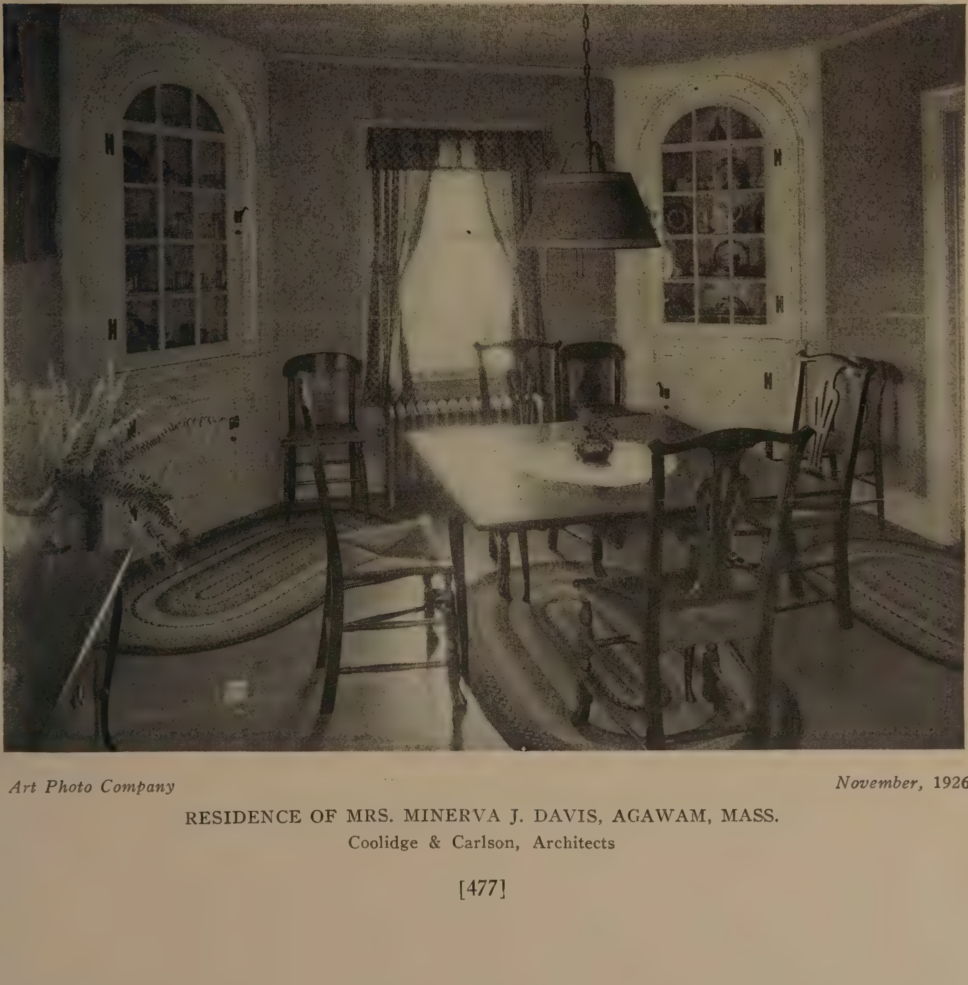


Photo, Kenneth Clark

November, 1926

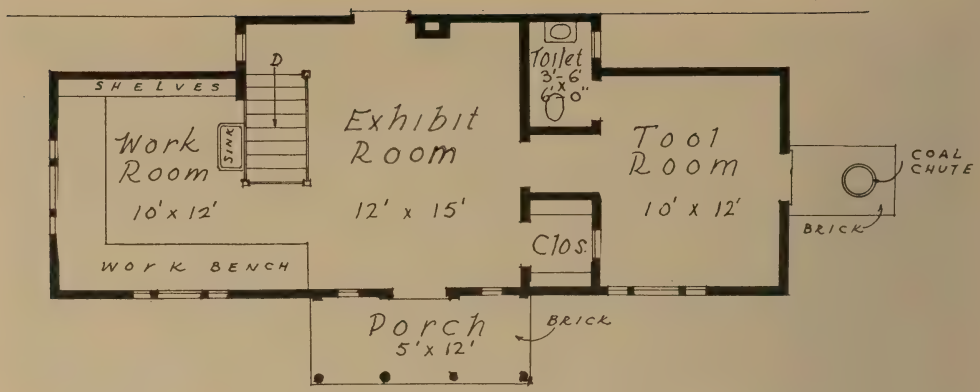
RESIDENCE OF THE MISSES MOLLER, MONTCLAIR, N. J.
Clifford C. Wendehack, Architect

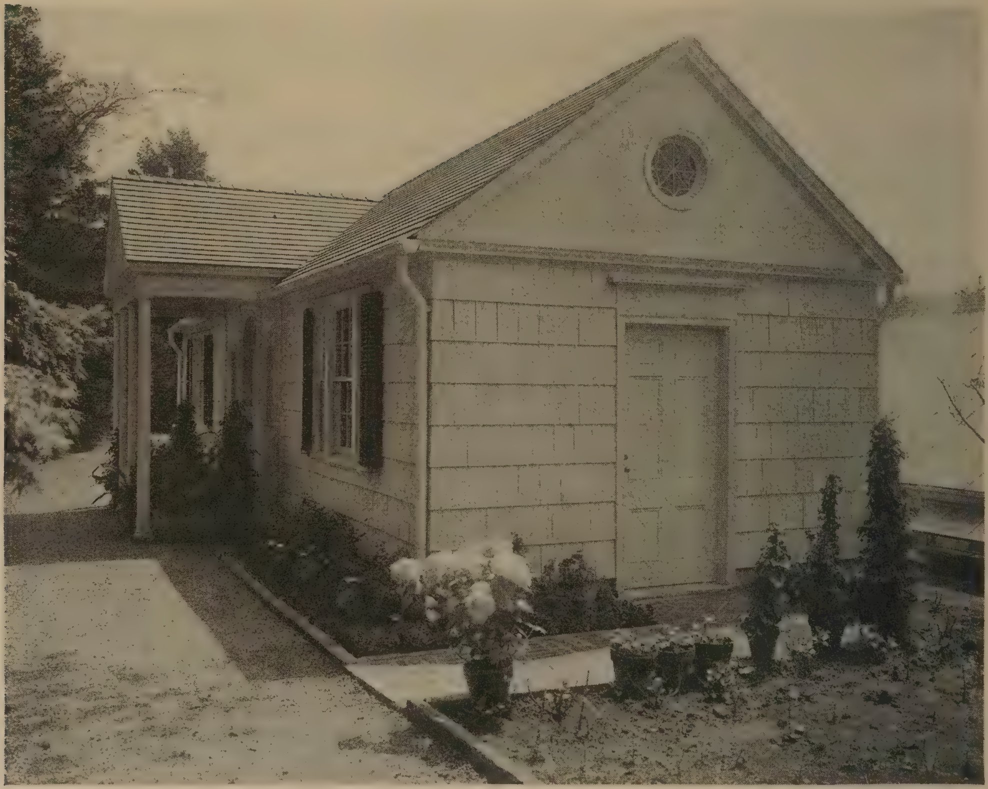




Art Photo Company *November,* 1926

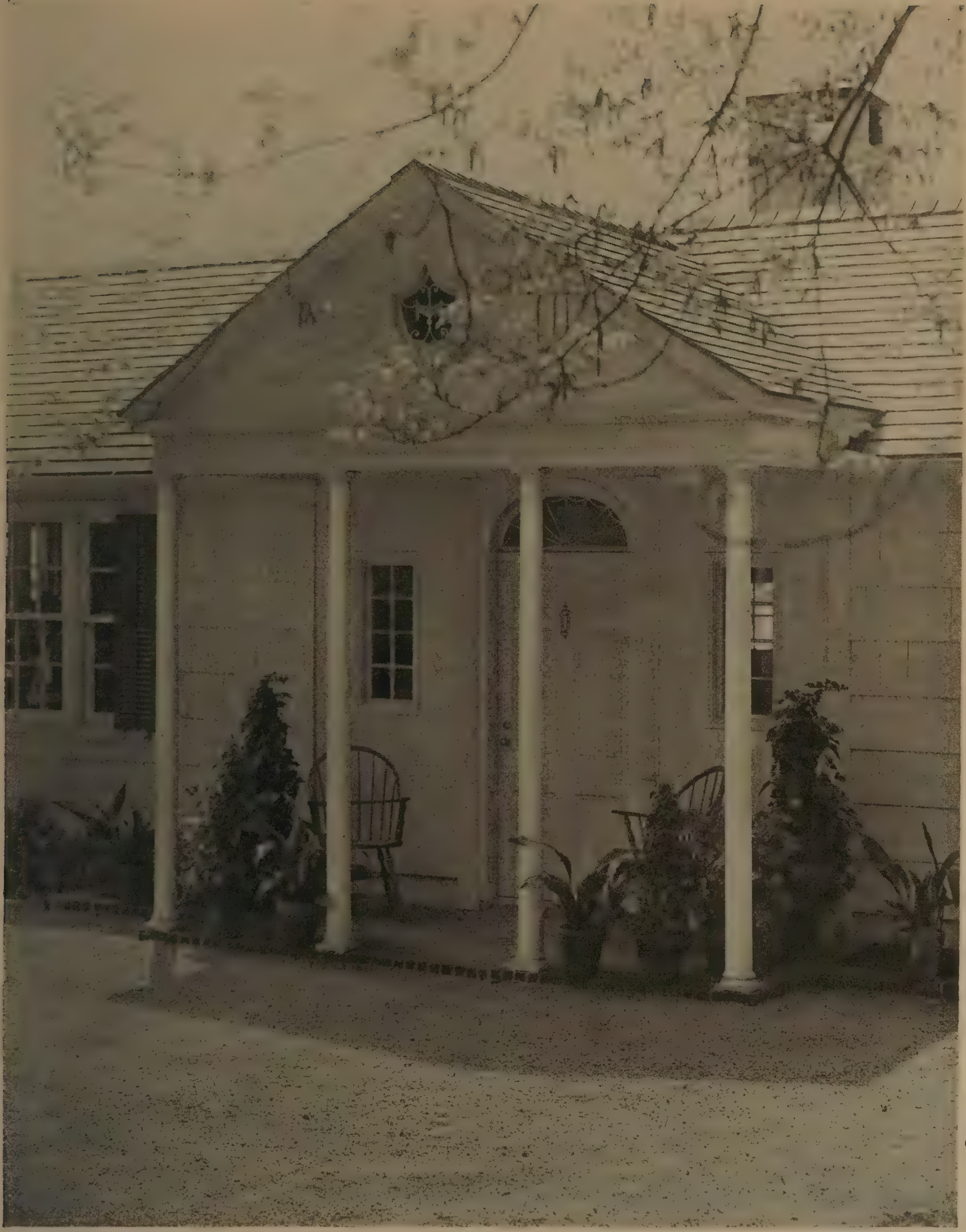
RESIDENCE OF MRS. MINERVA J. DAVIS, AGAWAM, MASS.
Coolidge & Carlson, Architects





Photo, Louis H. Dreyer *November,* 1926

A GARDEN HOUSE FOR MRS. L. W. HARKNESS, GLEN COVE, N. Y.
Charles S. Keefe, Architect



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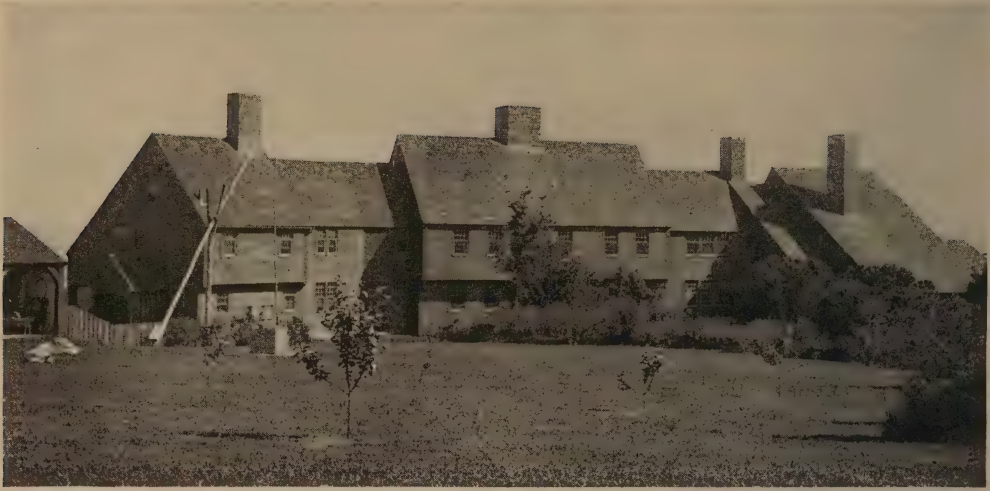
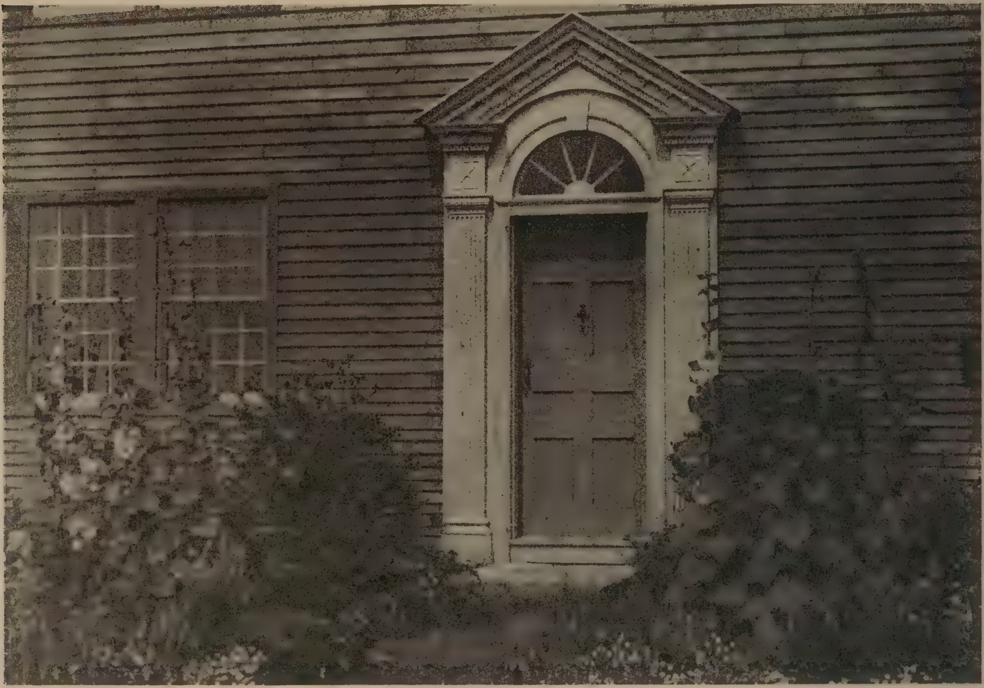
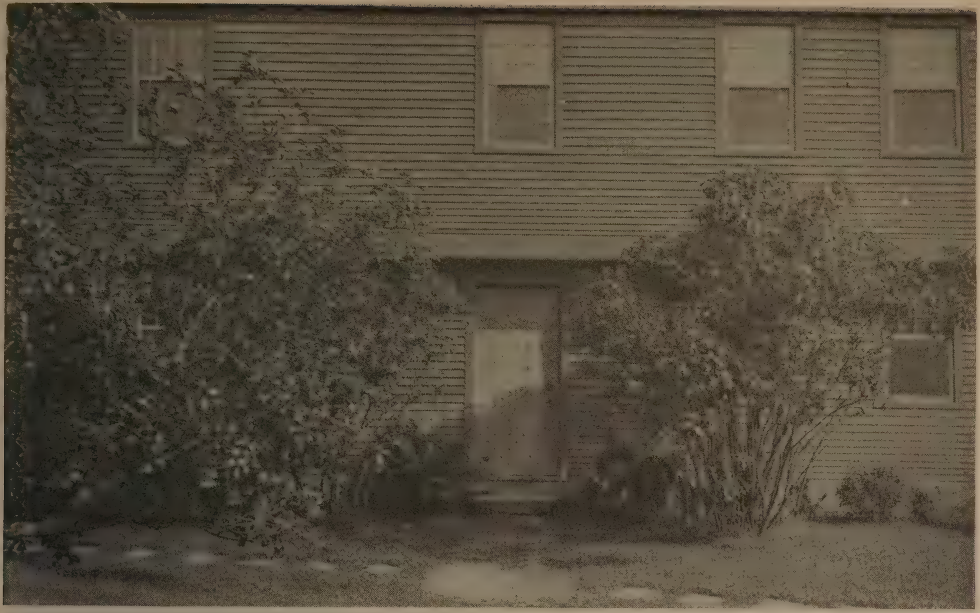
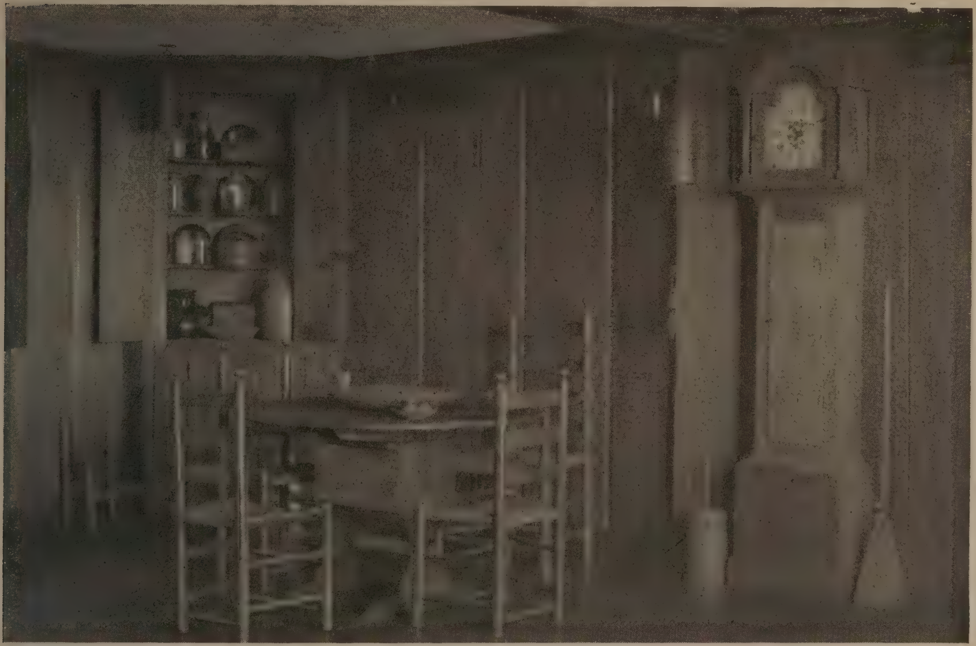




Photo, Antoinette Perrett *November,* 1926

THE COUNTRY HOUSE OF THE VERY REVEREND AND MRS. BRATENAHL
BRACE'S COVE, GLOUCESTER, MASS.
Designed by Mrs. Bratenahl
Carried Out by Bellows & Aldrich, Architects, and Henry Davis Sleeper



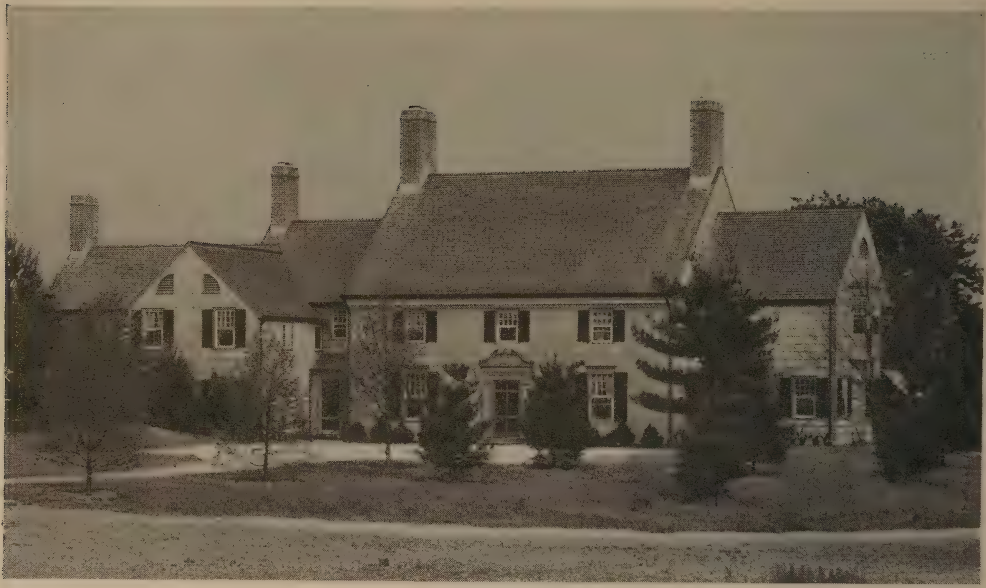


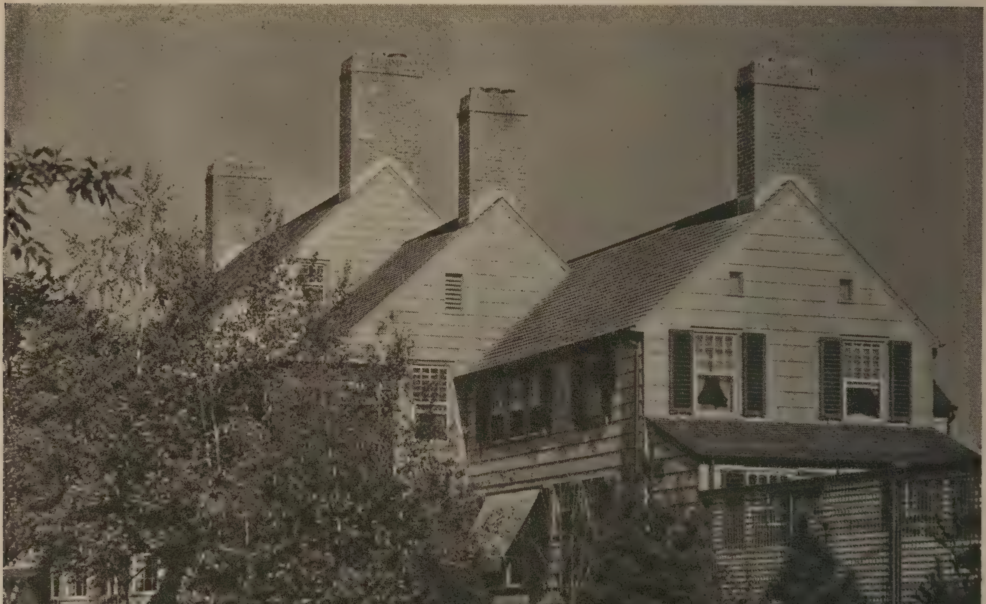
Photo, Antoinette Perrett *November,* 1926

THE COUNTRY HOUSE OF THE VERY REVEREND AND MRS. BRATENAHL,
BRACE'S COVE, GLOUCESTER, MASS.

Designed by Mrs. Bratenahl

Carried Out by Bellows & Aldrich, Architects, and Henry Davis Sleeper

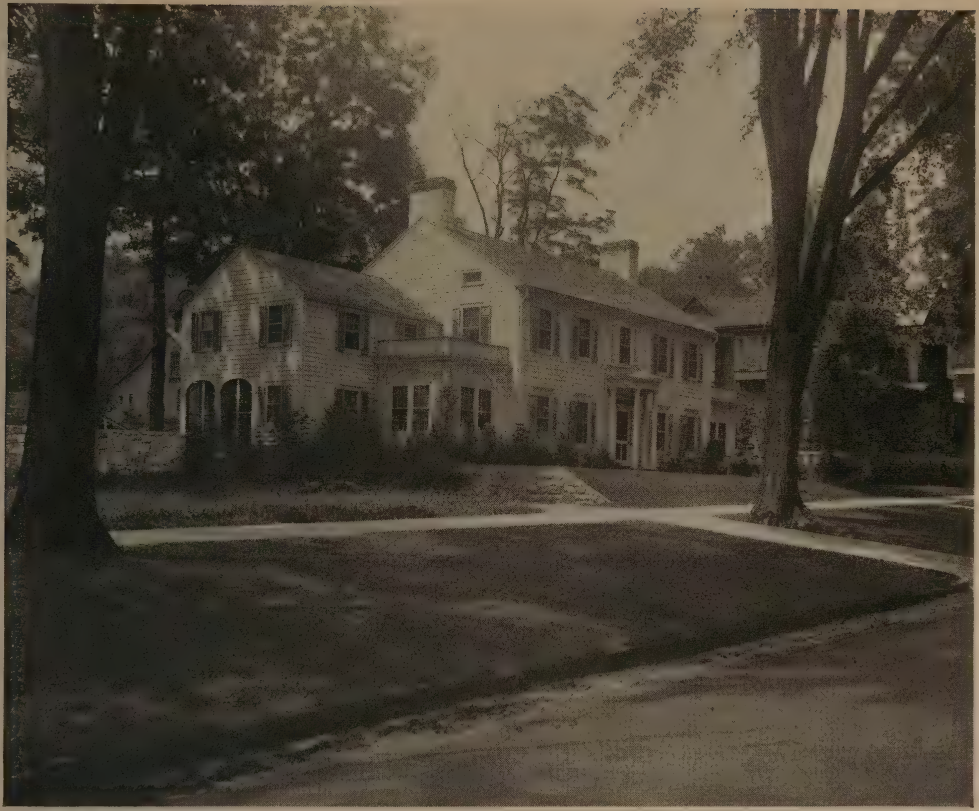


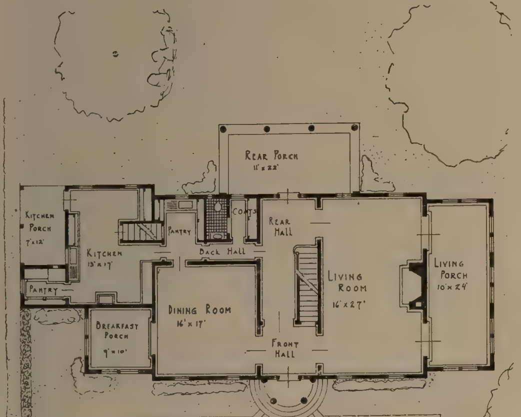


Photo, S. H. Gottscho

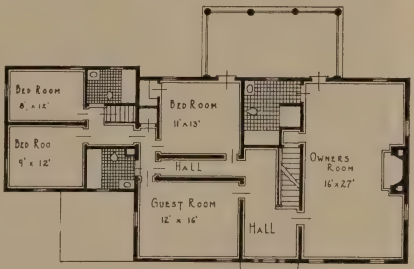
November, 1926

RESIDENCE OF W. ALLSTON FLAGG, ESQ., WESTBURY, L. I
Butler & Corse, Architects



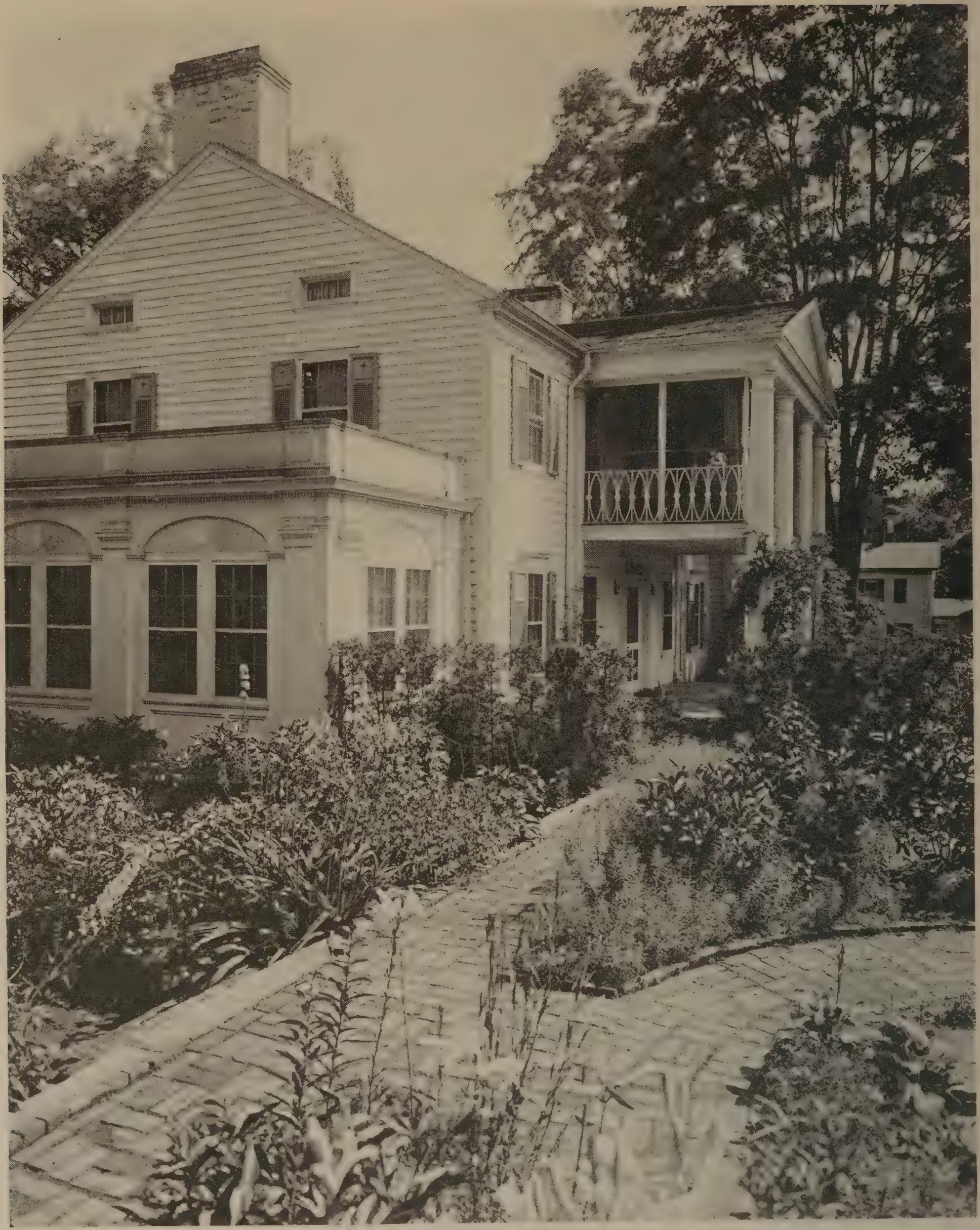


SIDEWALK



·SECOND · FLOOR PLAN·

RESIDENCE OF H. E. PETTEE, ESQ.,
SARATOGA SPRINGS
Alfred Hopkins, Architect



Photo, Foster Disinger

November, 1926

RESIDENCE OF H. E. PETTEE, ESQ., SARATOGA SPRINGS
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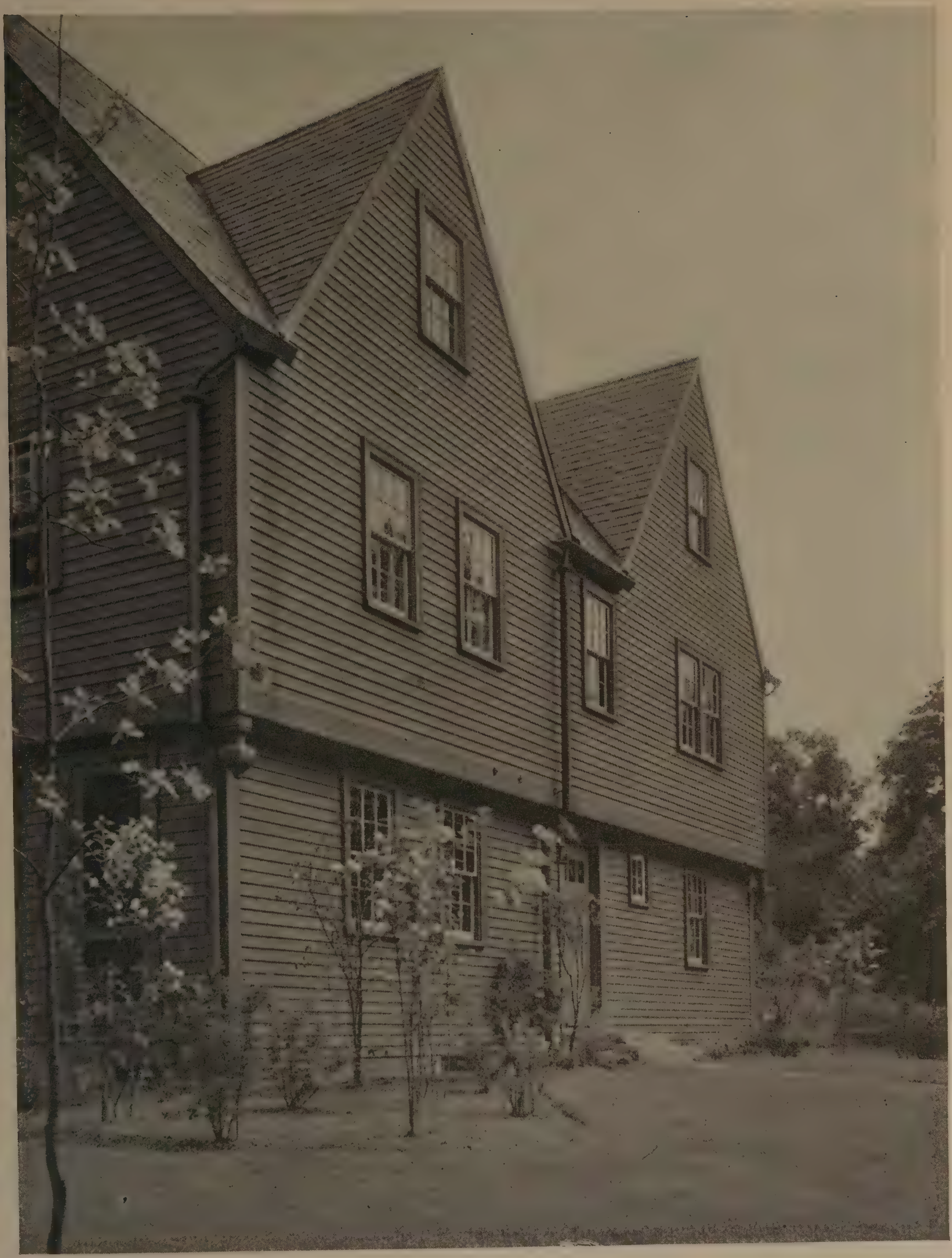
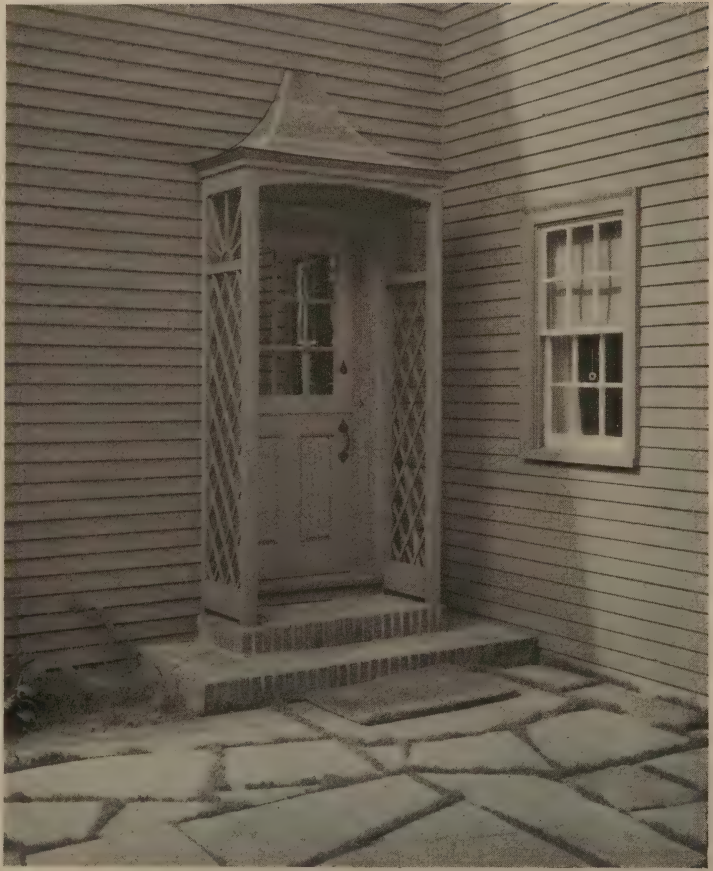
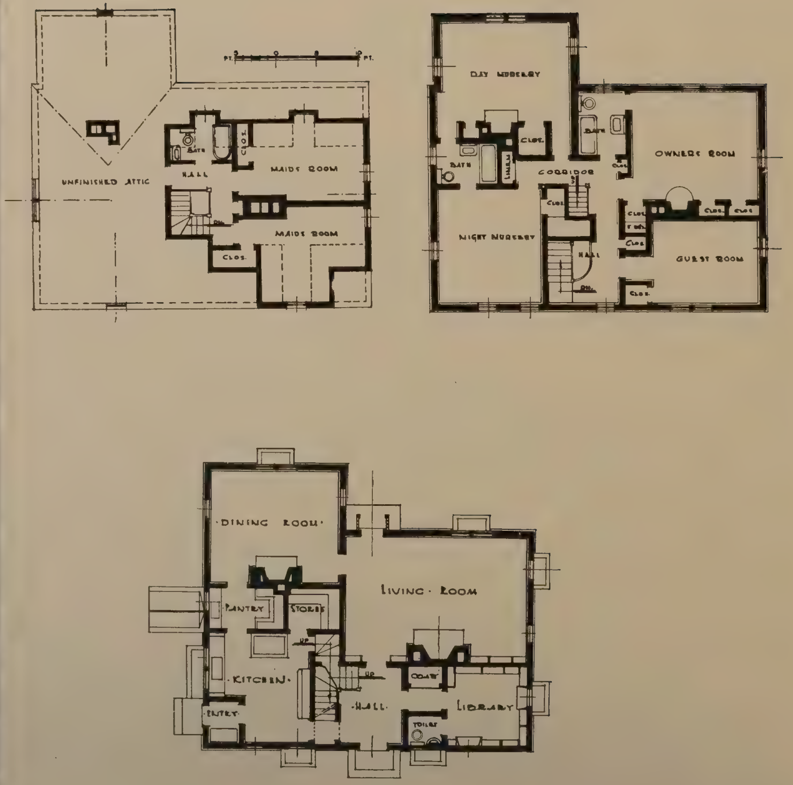


Photo, Paul J. Weber

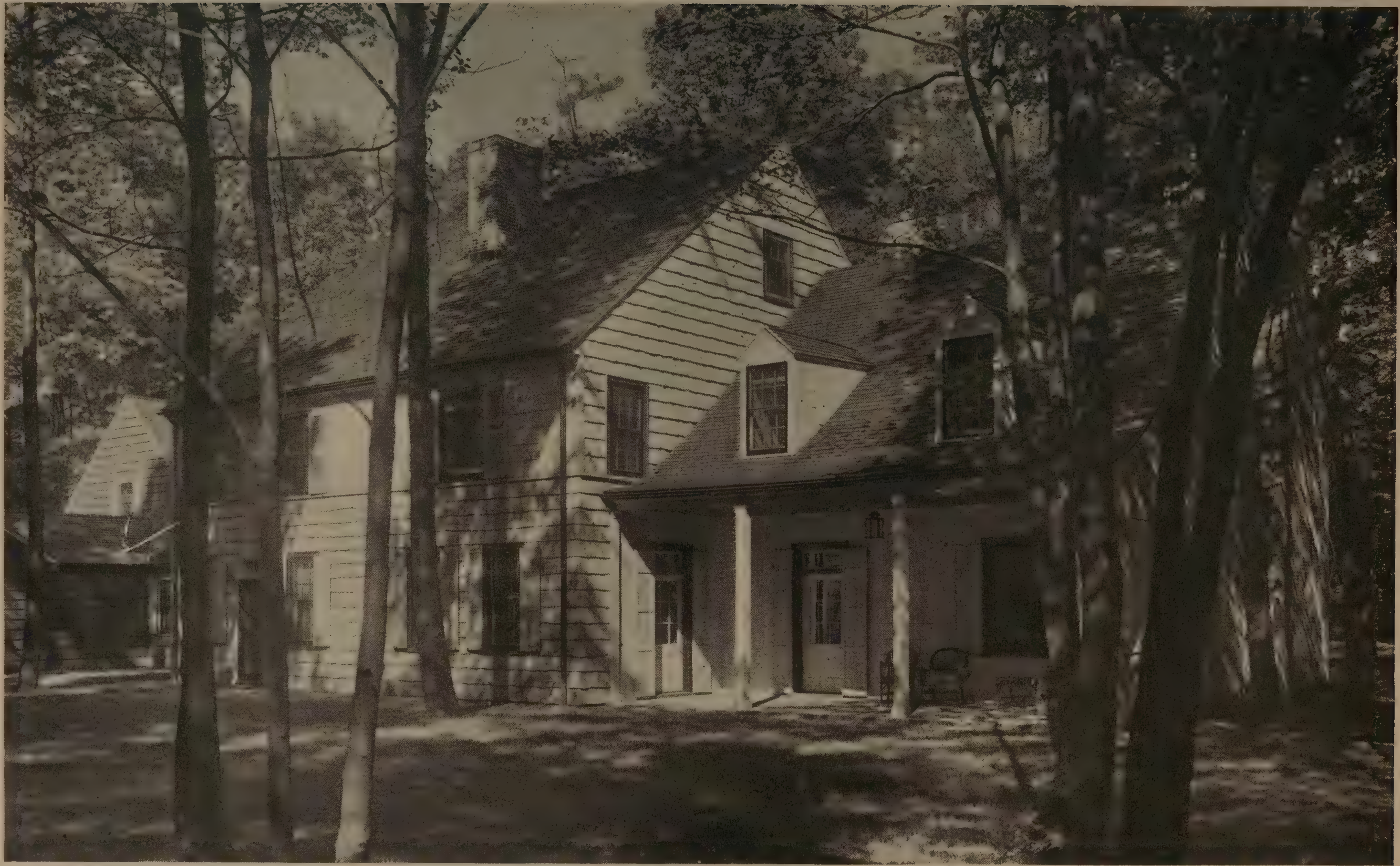
November, 1926

RESIDENCE OF DR. HENRY JACKSON, JR., CHESTNUT HILL, MASS.
Strickland, Blodget & Law, Architects





RESIDENCE OF DR. HENRY JACKSON, JR., CHESTNUT HILL, MASS.
Strickland, Blodget & Law, Architects



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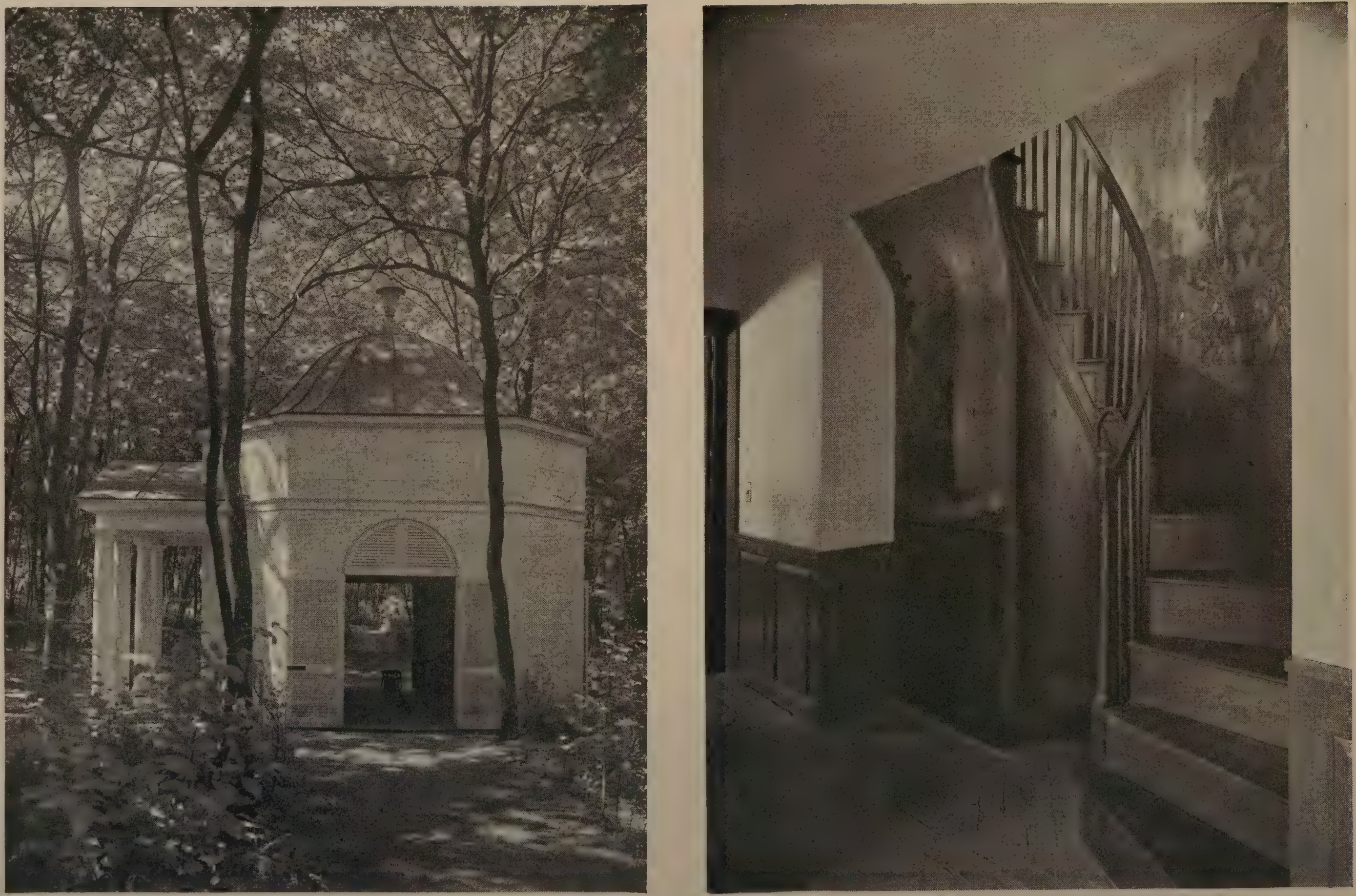

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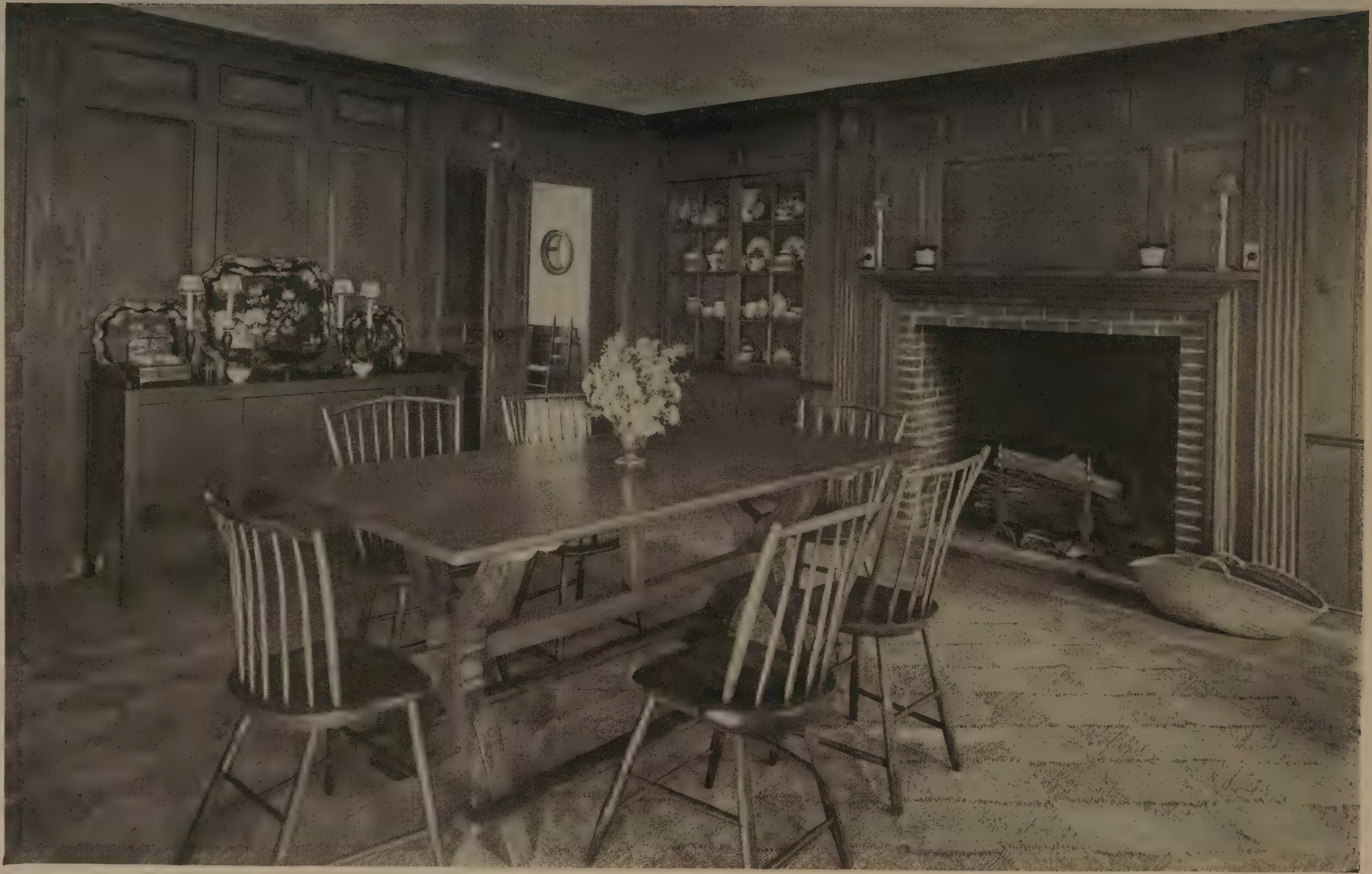

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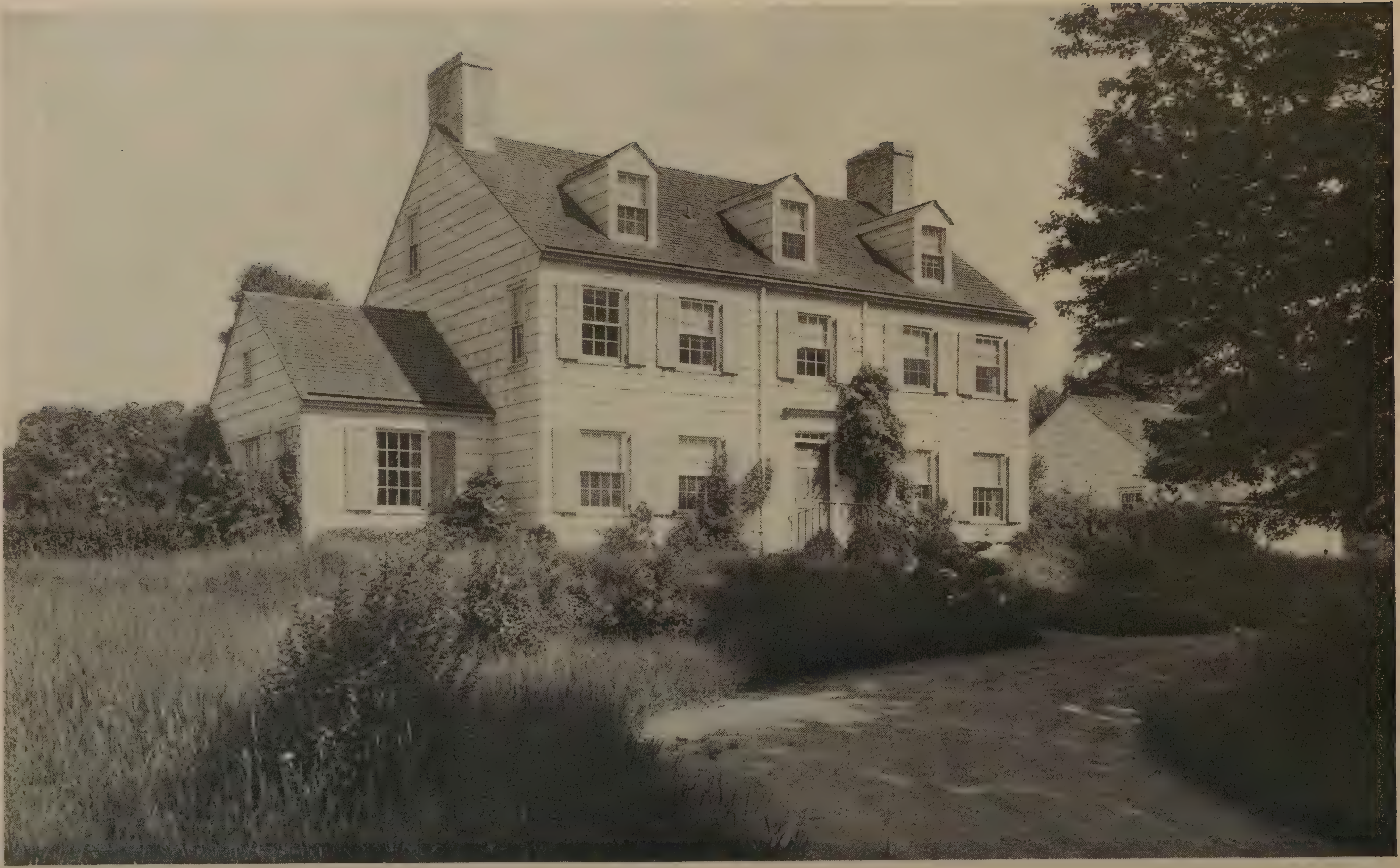

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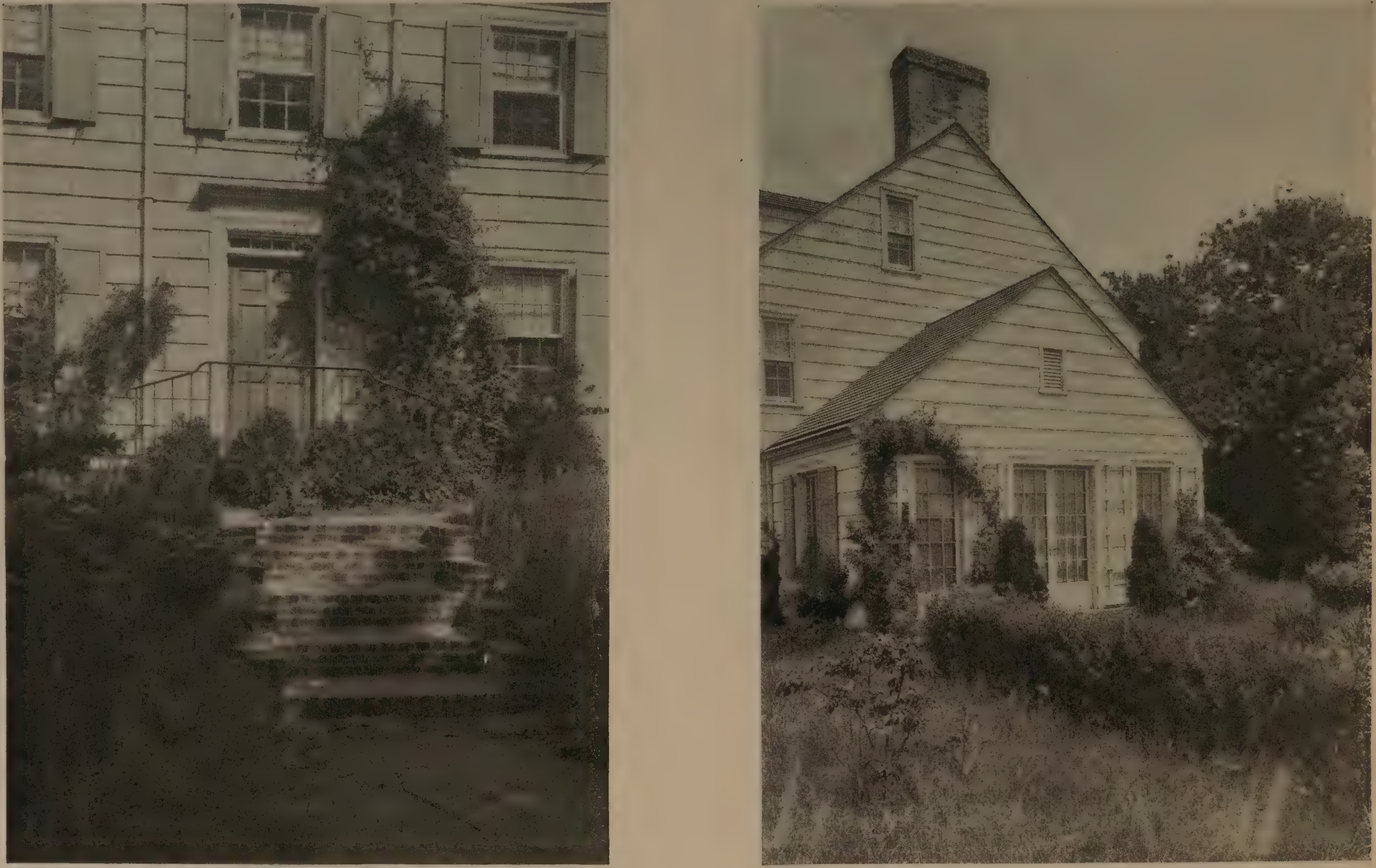

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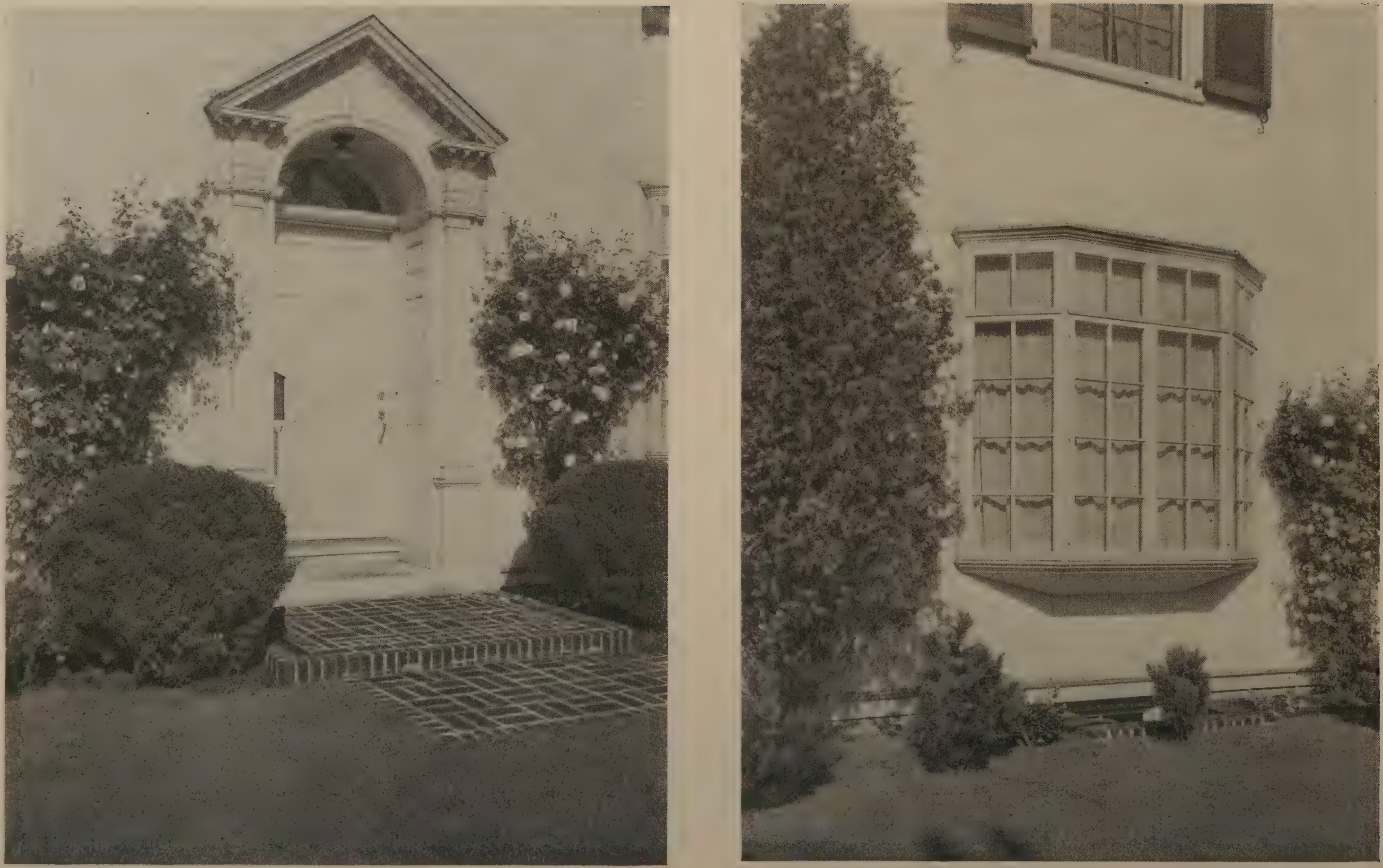

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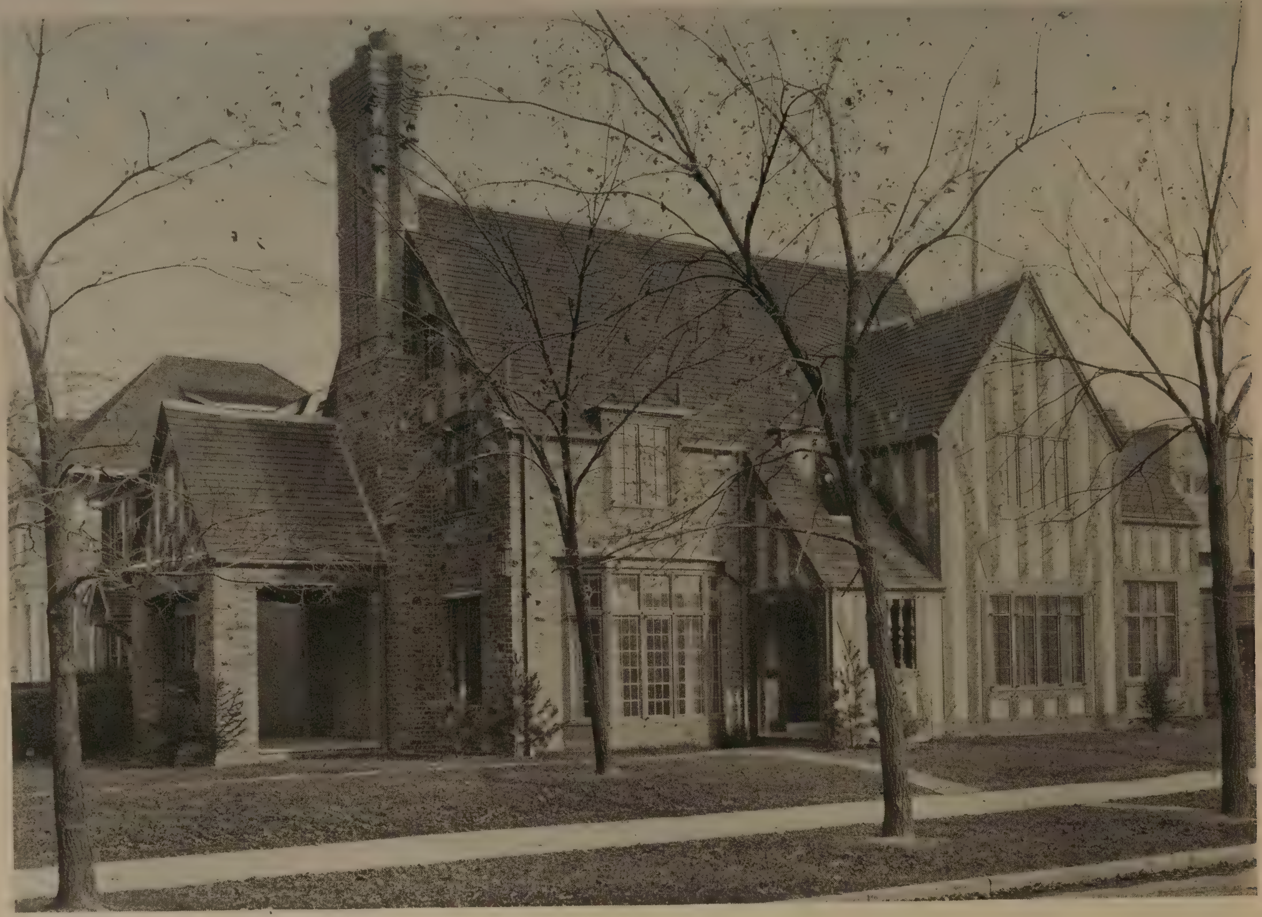

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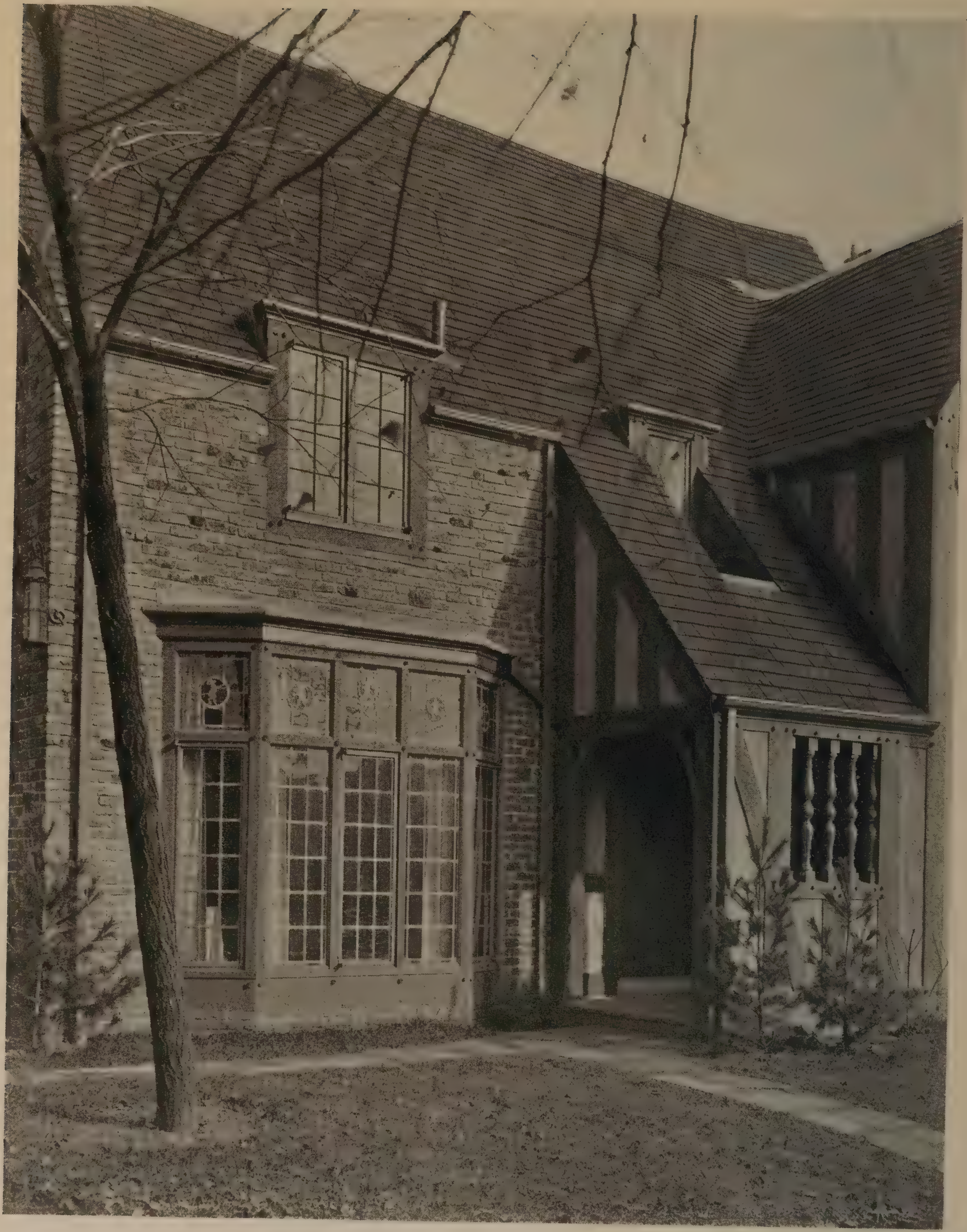

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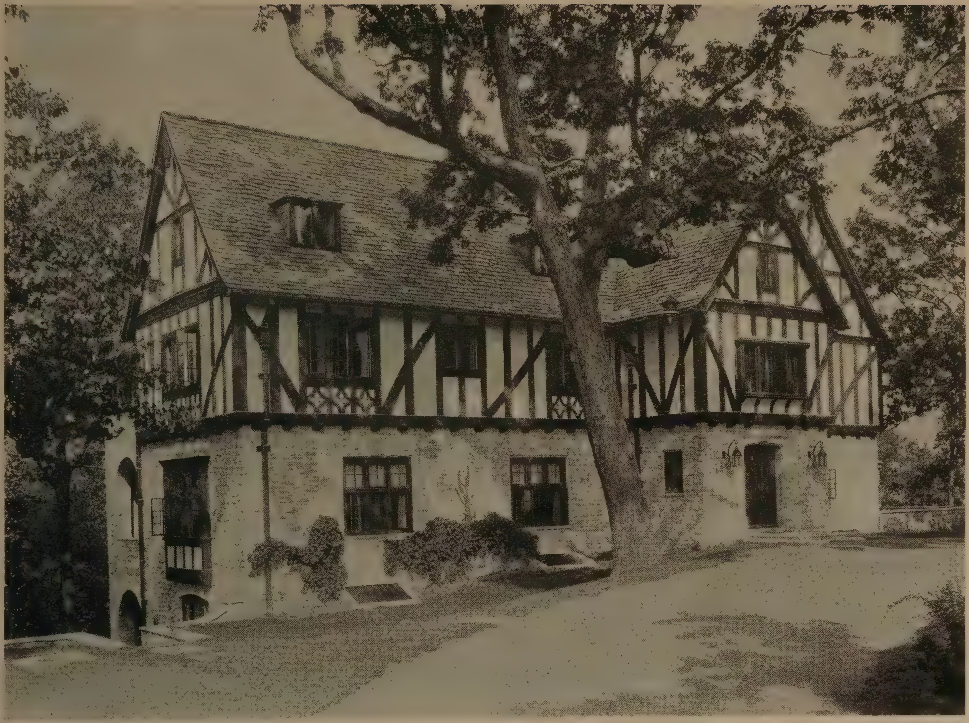

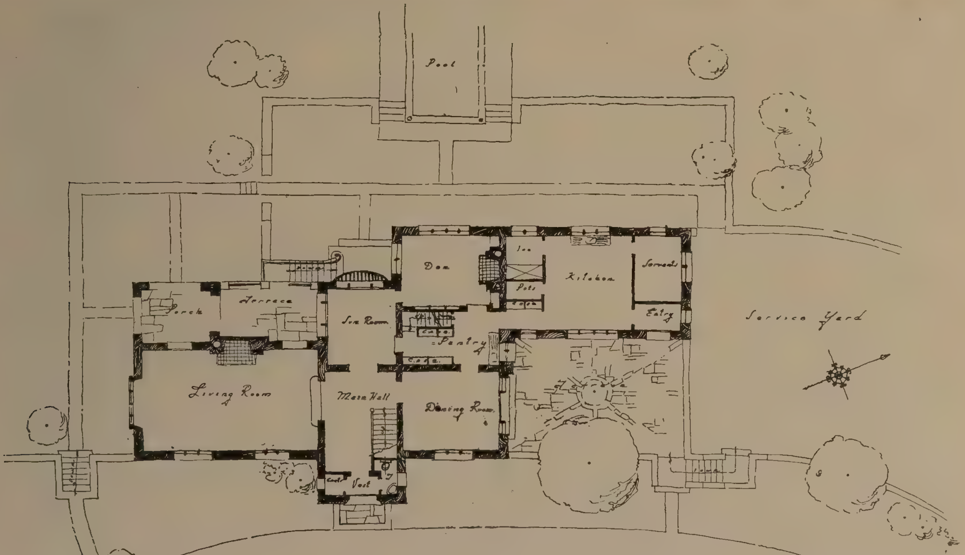

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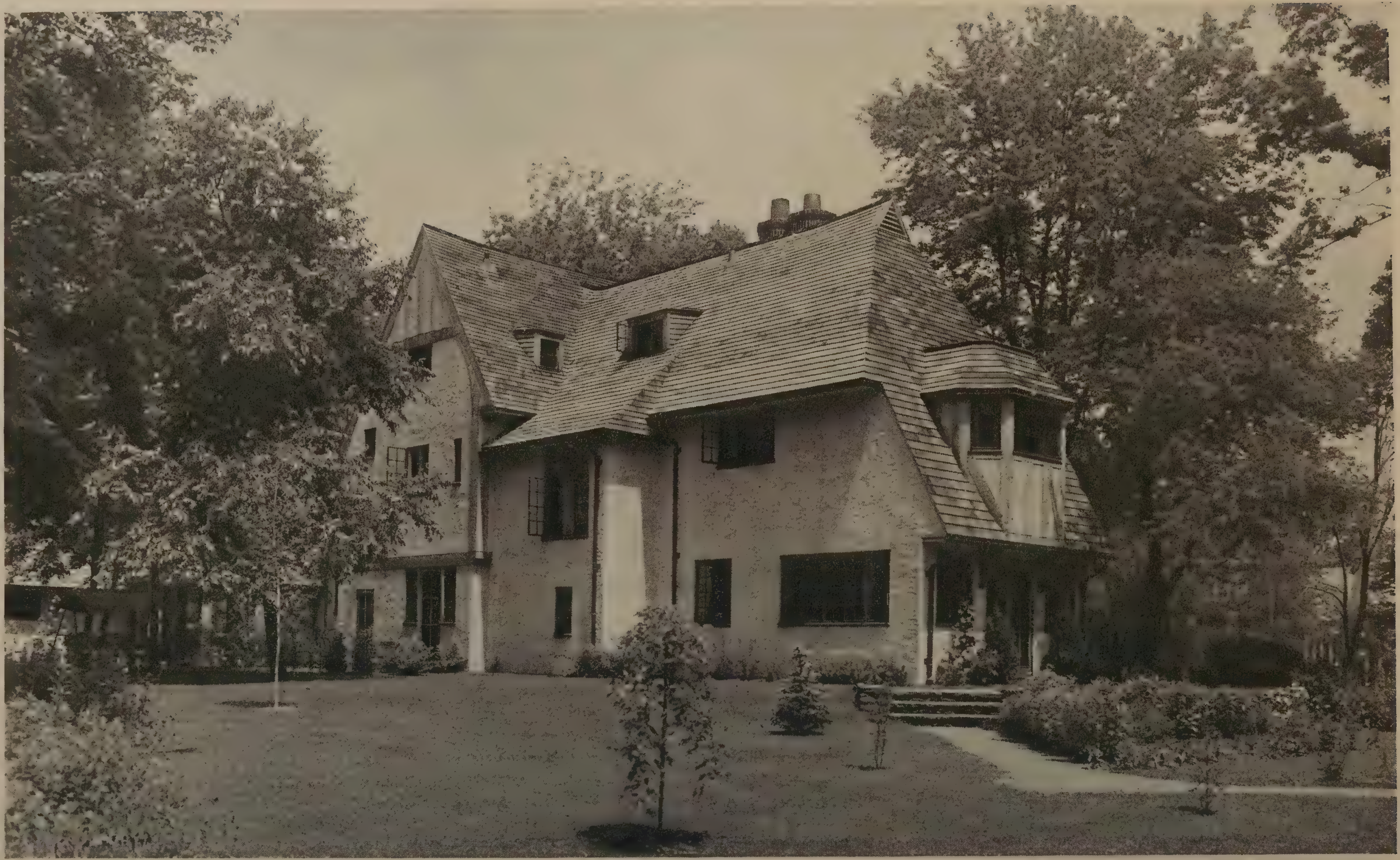

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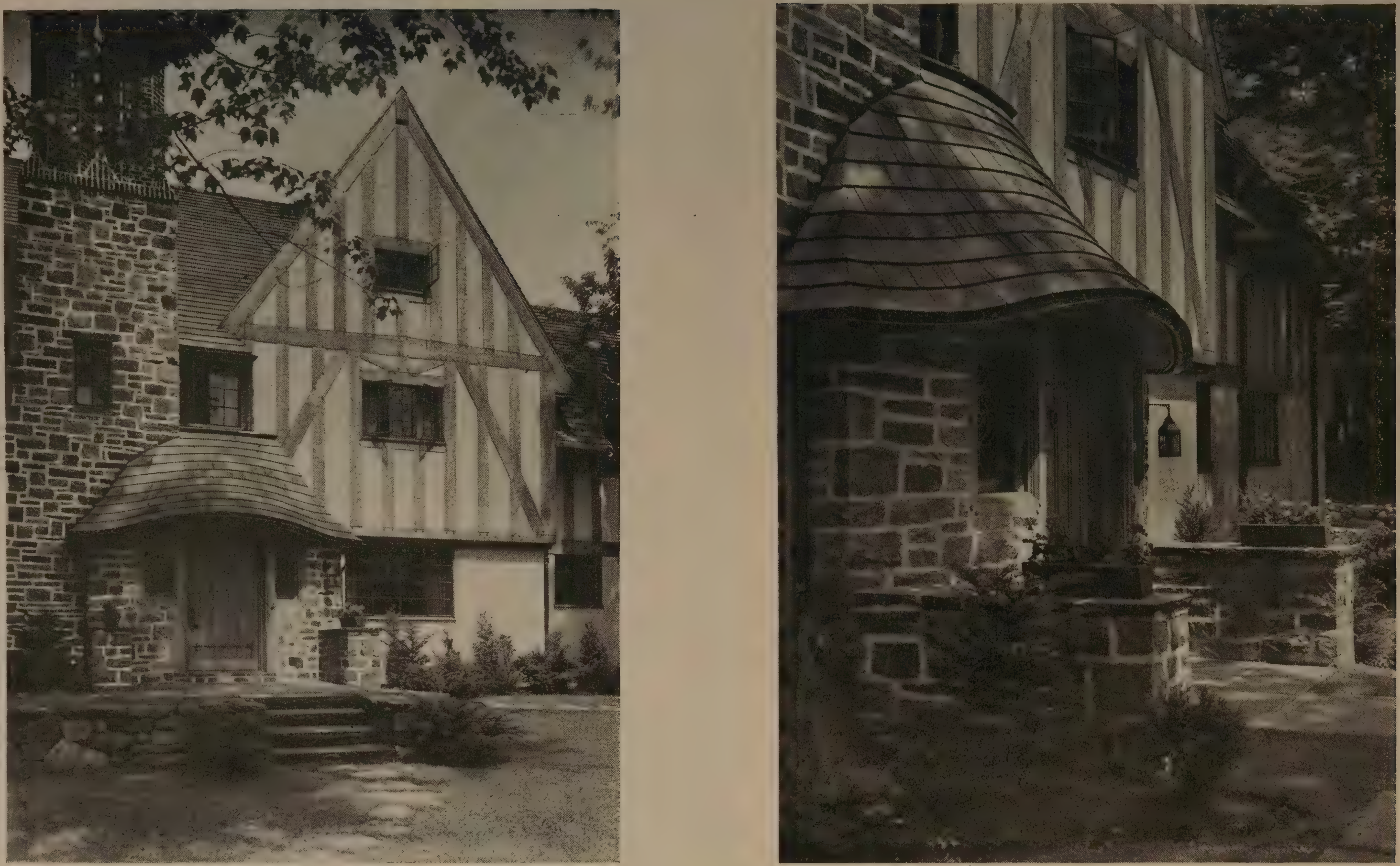

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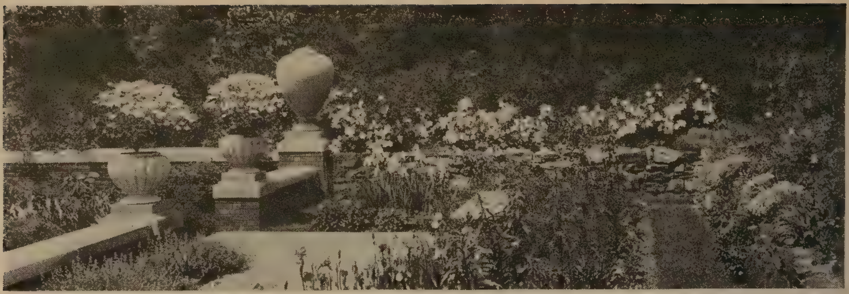

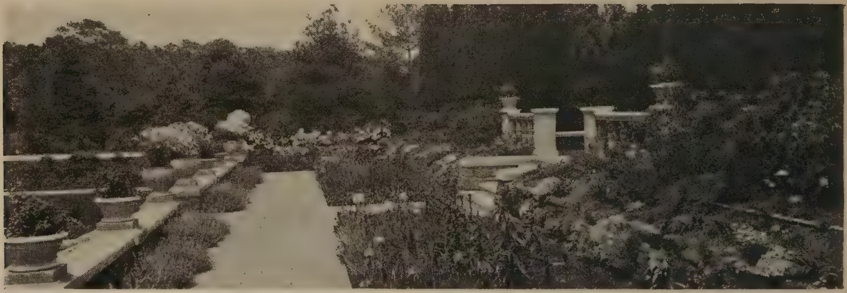

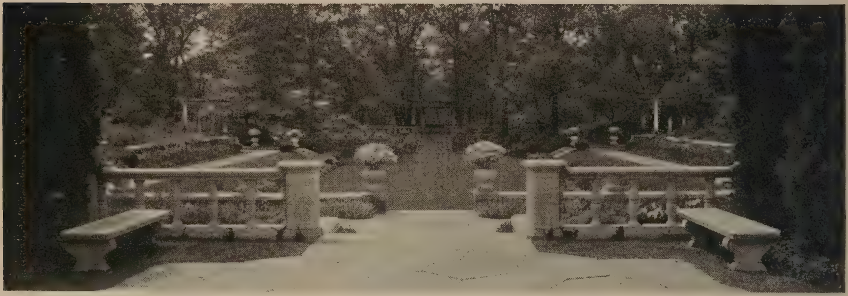

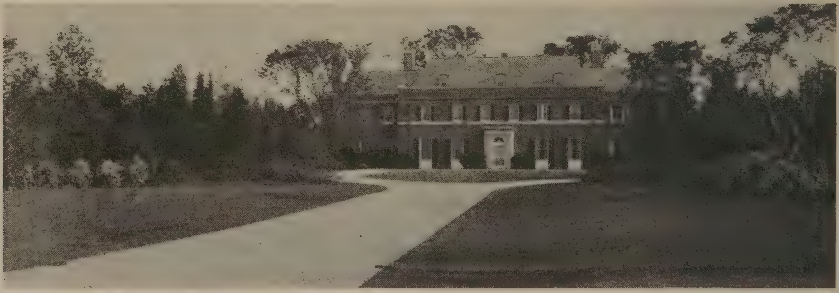

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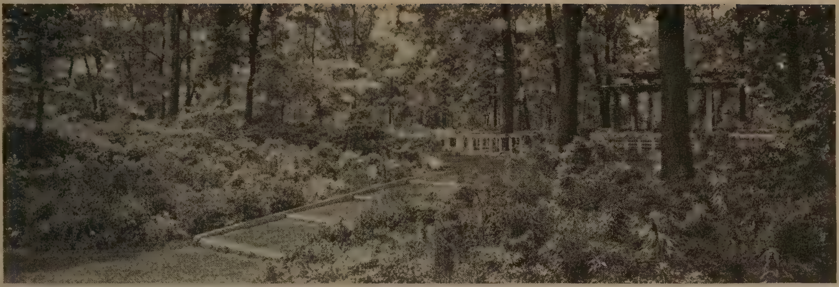
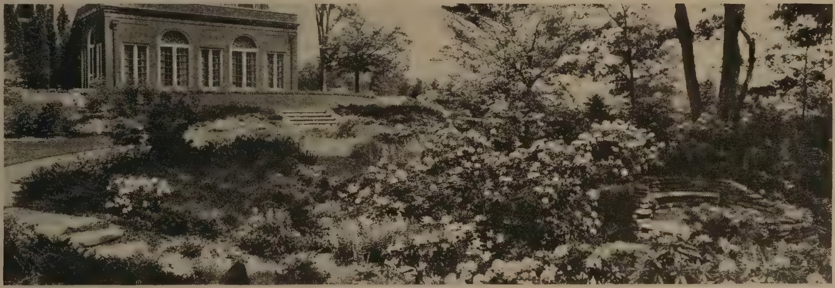
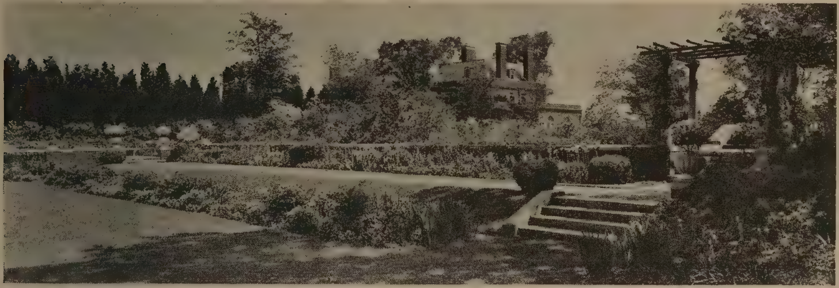
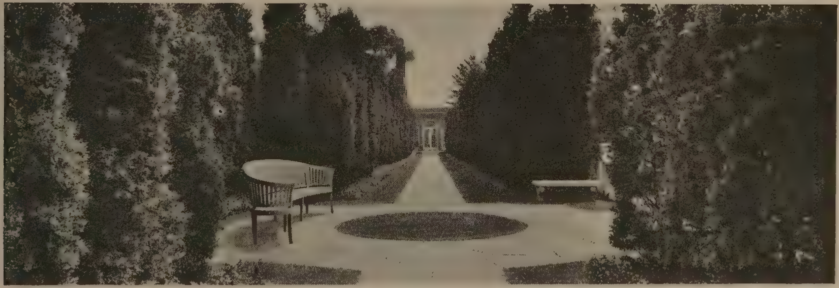
J. W. O'Connor, Architect
Olmsted Bros., Landscape Architects









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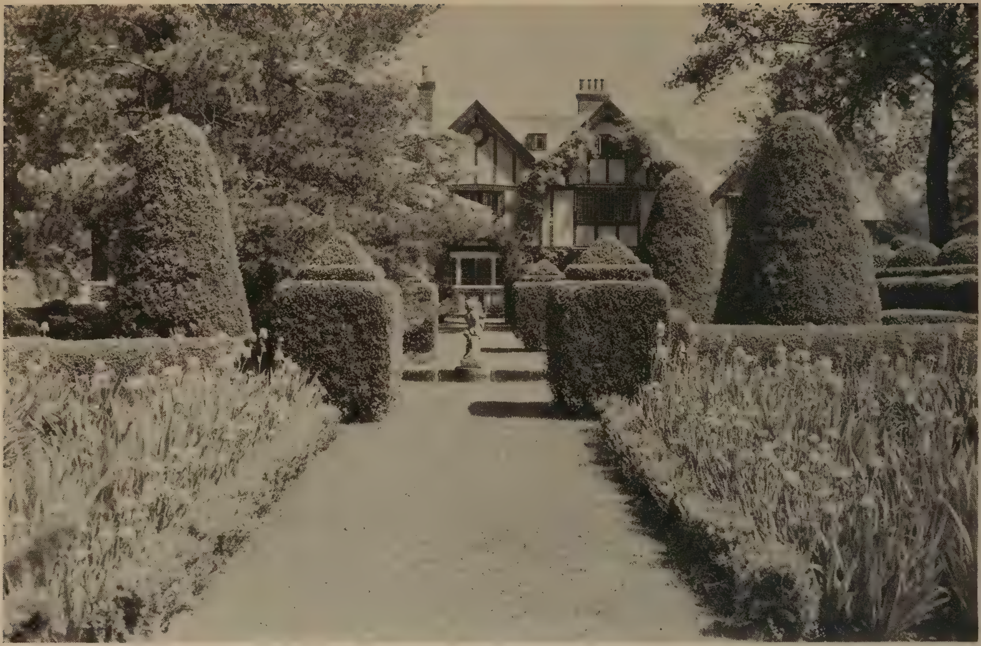

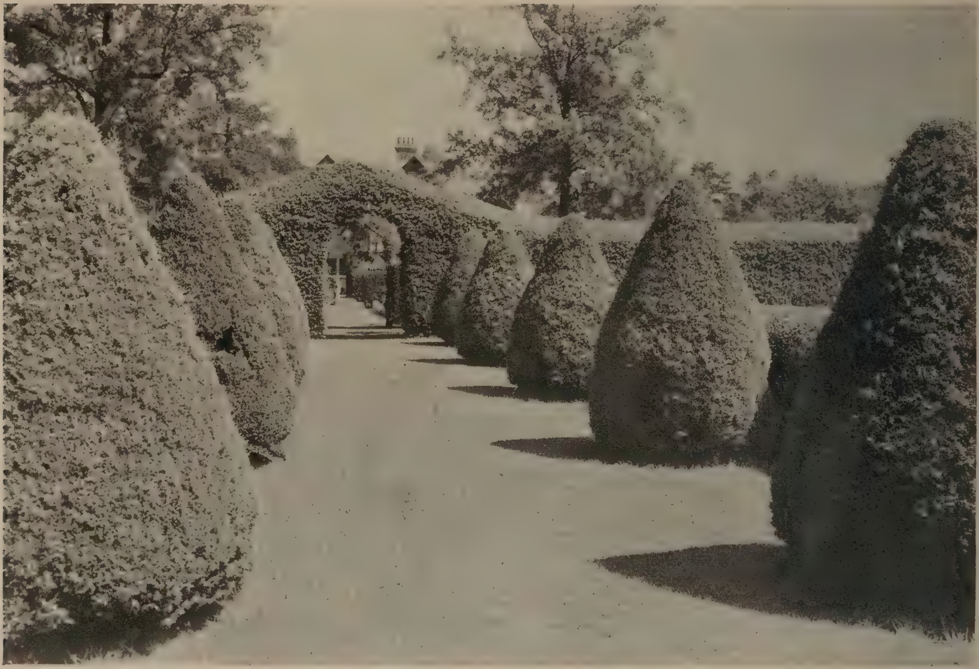

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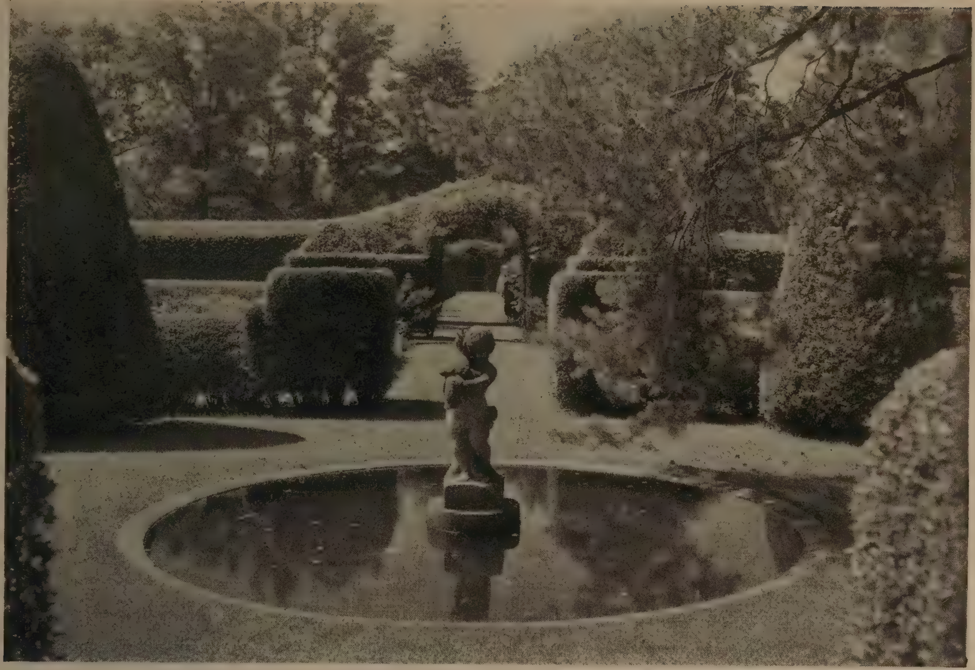
Baker & Howe, Architects
Charles Wellford Leavitt, Landscape Architect



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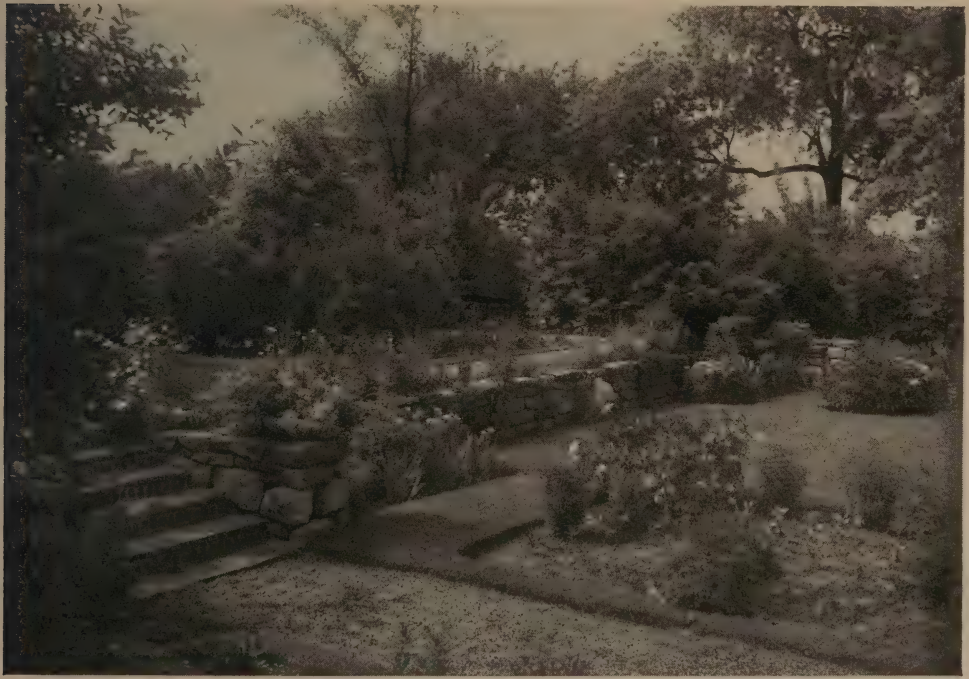
Charles Wellford Leavitt, Landscape Architect



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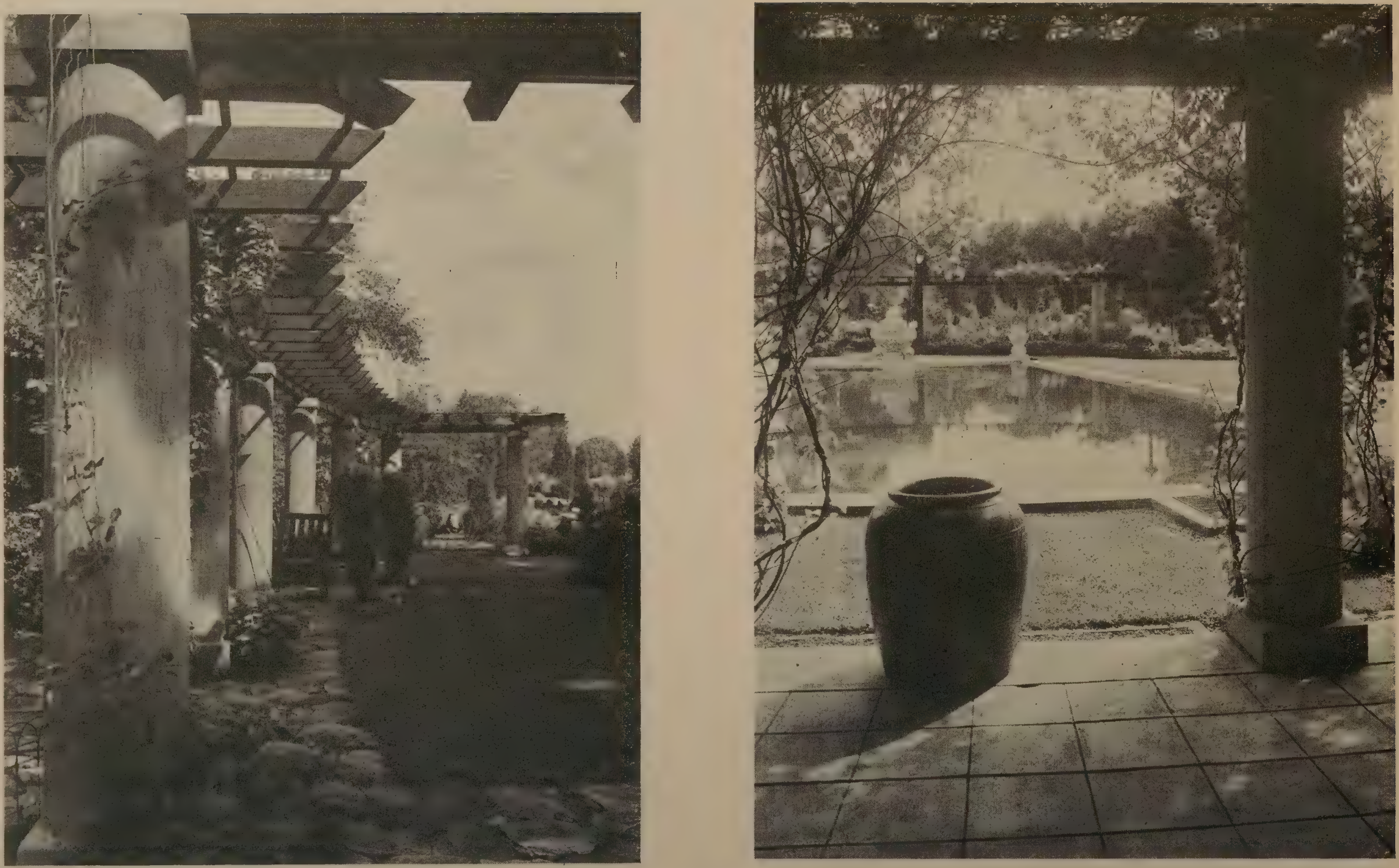

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Arnold W. Brunner and His Work. By: Robert I. Aitken, Edwin H. Blashfield, Daniel C. French, Clayton Hamilton, J. Horace McFarland, Brander Matthews, Brand Whitlock, Charles Harris Whitaker. New York: Press of the American Institute of Architects Inc. 1926 1st ed. 47 pp. Page plates. 100 Ill. (part colored.) 9 x 12 in. Bound in buckram. $15.00

Concrete Designers' Manual. By: George A. Hool, S. B., and Charles S. Whitney, M.C.E. New York: McGraw Hill Book Co., Inc. 1926. 2nd ed. xii. 329 pp. Diagrams. 5.7/8 x 9.1/8. Leatherette. $4.00
A thorough revision of this widely-known book of tables and diagrams for the rapid designing of reinforced concrete structures. The text is limited to explanations of the tables and diagrams. Where necessary, specific examples of how to use the diagrams are given.

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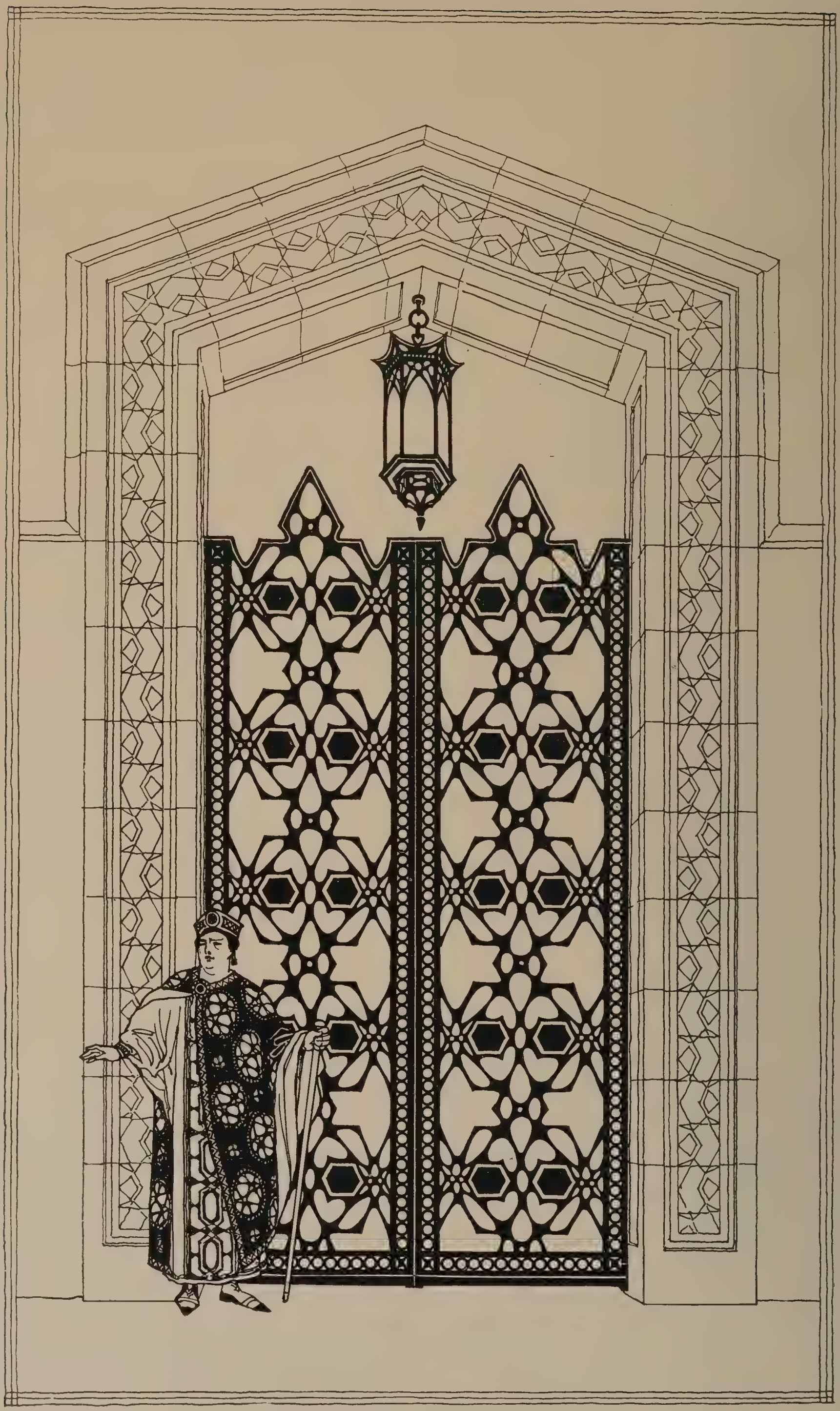
Imaginary Composition: The Gate

By Claude Bragdon



IMAGINARY COMPOSITION

(Ornament derived from 3x3 and 4x4 magic squares. See illustrations 9 and 11)

The
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VOLUME 60 DECEMBER, 1926 NUMBER 6

ORNAMENT *from* MAGIC SQUARES

By Claude Bragdon

THIS COMMENTARY and the accompanying illustrations represent one shovelful of "pay dirt" turned up in a prospecting tour through the mountain range of mathematics. Let me first tell what led to the undertaking of this quest:

An architect is from time to time under the necessity of providing suitable ornament for his constructions. Whenever such necessity arose I suffered a discomfort which never attended the working out of other aspects of an architectural problem. This feeling was due to a sense of inadequacy to the imposed task. After trying vainly to be original I turned to Meyer's Handbook of Ornament or some other architectural pony, and cribbed that which I could not create. This, though a common practice, was humiliating, but only when confronted with the inescapable alternative of either being original or—to my sense—ridiculous, was I aroused to consider a problem not mine merely, but that of every practitioner of the arts of design; the problem, namely, of how—lacking an ornamental mode which is our own—we shall develop one that may in some sort express our age and our psychology.

What happened was this: called upon to design a railway station for my native city of Rochester, it seemed axiomatic that no ornament should be employed which antedated steam transportation—which was older, that is, than the railway itself—for to translate our age of steel and steam into the space-language of Greece or Rome would be no less an anachronism than in the play of Julius Cæsar to give Cæsar a watch. Now because all of the ornamental motifs of any worth or importance do antedate the railroad, it appeared necessary either to eliminate ornament altogether, or else create it. The first was too stark and austere an alternative, and the second proved too difficult to a talent enervated by that order of parisitism I had practised in the past. What I did therefore was to modify and disguise some of the canonical classic ornamental motifs, much as a jazz band leader might syncopate the musical masterpieces of the past.

This compromise served its immediate

purpose, and proved moderately successful, but so far failed to content me that I undertook a searching inquiry into the whole subject of ornament, throughout the world and adown the ages. It became increasingly clear that all ornament, of whatever people or period, has a mathematical basis, that is, submits itself to a geometrical synopsis; that much of it, indeed, is only the repetition or symmetrical assembling of simple geometrical forms. Therefore, thus early in my quest, I concluded that mathematics must be the gold-bearing quartz: if out of it so much had come, much more could still be extracted.

Here was a prospect which held out some promise. Roughly speaking, all ornament is either frankly geometrical or else floral on a geometrical foundation — the rock could exist without the lichen, but not the lichen without the rock. We of the present age are urban, not bucolic: the stark geometry of cities is the *métier* in which we mostly live. It is an age not of romance, but of mathematics—or better, it is the age par excellence of the romance of mathematics, for by their light we penetrate into every unknown, minute or vast. Sing the mathematical age, therefore, in terms of mathematics; in other words, develop to the uttermost geometrical ornament. Such was my ultimate conclusion. Ruskin must have had some such view, also, for he declared, "I believe the only manner of rich ornament that is open to us is geometrical color mosaic, and that much might result from taking up that mode of design."

THE PYTHAGOREAN PROPOSITION (EUCLID, I. 47)

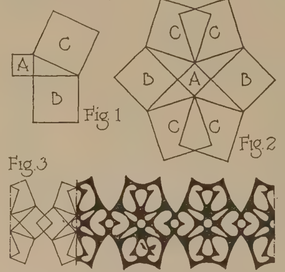


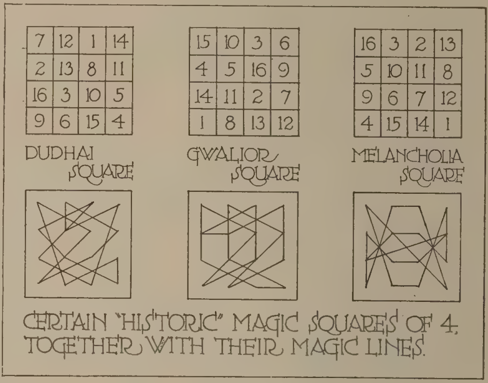
FIGURE 1 REPRESENTS THE THREE SQUARES ON THE SIDES OF A RIGHT-ANGLED TRIANGLE — A+B=C
FIGURE 2 REPRESENTS THE SAME REPEATED FOUR-FOLD WITH THE SQUARE "A" COMMON TO ALL.
FIGURE 3 SHOWS A NUMBER OF THESE FIGURES LINKED TOGETHER AND TRANSLATED INTO ORNAMENT BY "SOFTENING" THE STRAIGHT LINES INTO CURVES

Illustration 1

Another consideration which led me to mathematics was the following. Granting the soundness of the dictum, "Beauty is truth, truth beauty," it becomes of the first importance to discover some truth which is absolute, and mathematical truth *is absolute* within its own known and defined limits. The truth, for example, that the square on the hypotenuse of a right-angled triangle is equal to the sum of the squares on the other two sides is incontrovertible because it is completely demonstrable, but no matter how ardent one's conviction may be that God is Love, no demonstration of the truth of a proposition of this sort is possible from which—like the mathematical one—there is no imaginable escape or appeal.

Arrived thus far—in the El Dorado of mathematics, that is to say—the next step was to discover some *method of translation* of this *truth-to-the-mind* into *beauty-to-the-eye.* In the course of time I discovered several such processes of translation. These are set forth in "Projective Ornament" and in two chapters of "Architecture and Democracy."

This essay shall deal with one process only, based upon the magic line in the magic square. Before going into that, however, it will be well to illustrate, by means of a single example, derived from the Pythagorean proposition above referred to—that the square on the hypotenuse of a right-angled triangle is equal to the sum of the squares on the other



7	12	1	14
2	13	8	11
16	3	10	5
9	6	15	4

DUDHAI SQUARE

15	10	3	6
4	5	16	9
14	11	2	7
1	8	13	12

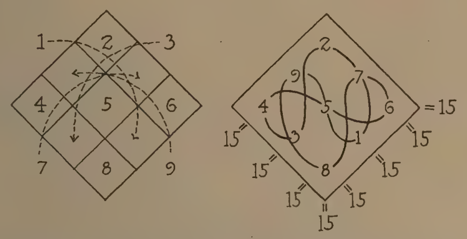
GWALIOR SQUARE

16	3	2	13
5	10	11	8
9	6	7	12
4	15	14	1

MELANCHOLIA SQUARE

CERTAIN "HISTORIC" MAGIC SQUARES OF 4, TOGETHER WITH THEIR MAGIC LINES.

Illustration 2



THE MAGIC SQUARE OF 3 AND ITS MAGIC LINE

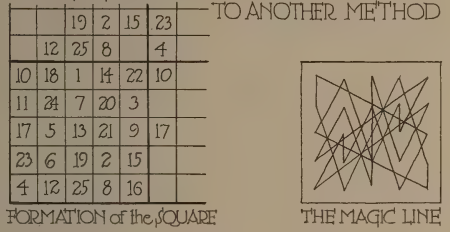
ARRANGE THE DIGITS IN THEIR NATURAL ORDER, IN THREE HORIZONTAL ROWS, DRAW DIAGONAL LINES ESTABLISHING A SQUARE WITH 5 FILLED, AND 4 EMPTY CELLS TRANSFER THE NUMBERS OUTSIDE THE SQUARE TO THE EMPTY CELLS OPPOSITE TO EACH. THIS YIELDS THE MAGIC SQUARE OF 3, IN WHICH EACH COLUMN ADDS TO 15, THE MAGIC SUM. THE MAGIC LINE IS FOUND BY FOLLOWING THE NUMBERS IN THEIR NATURAL ORDER

Illustration 3

two sides—the general method whereby mathematics may be metamorphosed into ornament.

Figure 1, Illustration 1, is the Pythagorean proposition in graphic form: the two smaller squares, A and B, are together equal in area to the large square, C. That is to say, the three are bound together in an exact mathematical relation, and this produces a certain sense of satisfaction to the mind, and—probably for that reason—a sense of harmony to the eye. Let us capitalize this if we can, by using the diagram itself as a motif for ornament. This is achieved by repeating it fourfold, as in figure 2—a symmetrical grouping around a common center which is the smallest square, and common therefore to all four figures. Here we have no mere fortuitous aggregation of lines, but a thing which, without being a representation of any natural organic form, nevertheless *means something* and *says something*—publishes, so to speak, a truth of mathematics. By dealing with it in some such manner as is indicated in figure 3 it can be made to serve as ornament.

A MAGIC SQUARE OF 5 MADE ACCORDING TO ANOTHER METHOD



		19	2	15	23	
	12	25	8		4	
10	18	1	14	22	10	
11	24	7	20	3		
17	5	13	21	9	17	
23	6	19	2	15		
4	12	25	8	16		

FORMATION of the SQUARE

THE MAGIC LINE

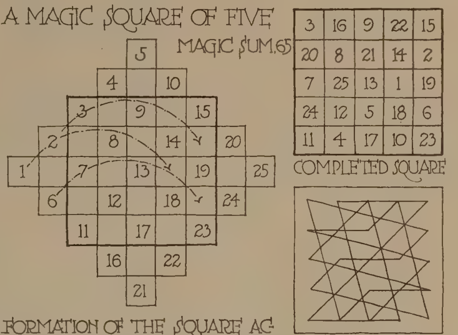
THIS IS BASED ON THE "KNIGHT'S MOVE" AS IN CHESS. THE METHOD CONSISTS IN CONSTRUCTING PARTS OF AUXILIARY SQUARES AROUND THE MAIN SQUARE AND TEMPORARILY WRITING THE NUMBERS IN THE CELLS OF THESE AUXILIARY SQUARES WHEN THEIR PLACING CARRIES THEM OUTSIDE THE LIMITS OF THE MAIN SQUARE. THE TEMPORARY LOCATION OF THESE NUMBERS WILL THEN INDICATE INTO WHICH OF THE CELLS OF THE MAIN SQUARE THEY MUST BE PERMANENTLY TRANSFERRED

STARTING WITH 1 IN THE CENTER OF THE TOP LINE, THE FIRST KNIGHT'S MOVE OF TWO CELLS UPWARD AND ONE TO THE RIGHT TAKES 2 INTO THE SECOND CELL OF THE SECOND LINE FROM THE BOTTOM IN ONE OF THE AUXILIARY SQUARES, SO 2 MUST BE TRANSFERRED TO THE CORRESPONDING POSITION IN THE ORIGINAL SQUARE. STARTING THENCE AGAIN, THE NEXT MOVE PLACES 3 WITHIN THE MAIN SQUARE, BUT 4 GOES OUT AND MUST BE TRANSFERRED TO THE SAME LOCATION IN THE MAIN SQUARE AND SO THROUGHOUT.

Illustration 5

A MAGIC SQUARE OF FIVE

MAGIC SUM 65



3	16	9	22	15
20	8	21	14	2
7	25	13	1	19
24	12	5	18	6
11	4	17	10	23

COMPLETED SQUARE

FORMATION OF THE SQUARE ACCORDING TO THE SAME METHOD SHOWN FOR THE MAGIC SQUARE OF 3.—THERE ARE NUMEROUS OTHER METHODS, EACH ONE OF WHICH WILL YIELD A DIFFERENT MAGIC LINE

THE MAGIC LINE, FOUND BY FOLLOWING THE NUMBERS IN THEIR NATURAL ORDER FROM 1 TO 25

Illustration 4

Coming, by way of this detour, to the particular subject of this essay (ornament from magic squares, the first thing to do, obviously, is to explain to the uninitiated what a magic square is. It is a numerical acrostic—an assemblage of numbers in the form of a square so disposed with relation to one another that each vertical column, each horizontal column, and the two long diagonals yield the same sum. These are the minimum requirements; there are magic squares which far transcend them in the number and variety of their magic properties. Hutton's general definition of a magic square, being a trifle more detailed than the above, may give the reader a clearer idea. It is as follows:

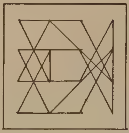
"The name magic square is given to a square divided into several small equal squares or cells, filled with the terms of any progression of numbers, but generally an arithmetical one, in such a manner that those in each band, whether horizontal or vertical or diagonal, shall always form the same sum."

		1		15
	5			16
			20	
10			21	
11		25		

Illustration 6

Though the making of magic squares would be classed today as a "mathematical recreation," a certain religious or mystical significance has always in the past attached to these arrangements of numbers. Perhaps this is because they possess the charm of mystery, and appear to betray the operation of some hidden, supernal intelligence, or perhaps it is because they are symbols of that transformation which may be wrought within the confused, chaotic, "unregenerate" nature of man through the action of his will and intelligence: that "great

14	1	15	4
7	12	6	9
2	13	3	16
11	8	10	5



A "SUPERMAGIC" SQUARE OF 4

THIS SQUARE POSSESSES VERY MANY UNUSUAL PROPERTIES. THE FOLLOWING EACH TOTAL THE MAGIC SUM 34.
(a) ALL ROWS, COLUMNS AND DIAGONALS
(b) ALL SUB-SQUARES OF FOUR NUMBERS
(c) THE FOUR CORNER NUMBERS
(d) PARALLEL SEMI-DIAGONALS AND (e) PARALLEL QUARTER- AND THREE-QUARTER DIAGONALS
(f) OPPOSITE PARALLEL HALF-SIDES
(g) SIMILAR TERMINATIONS OF ANY KNIGHT'S MOVE ON OPPOSITE SIDES OF ANY CENTRAL LINE OF THE SQUARE
(h) THE FOUR CORNER NUMBERS OF EVERY SQUARE OF NINE CELLS
(i) THE SUM OF THE TWO CENTRAL NUMBERS IN ANY LINE, HORIZONTAL OR VERTICAL, AND THE TWO OUTER NUMBERS OF A PARALLEL LINE NEXT BUT ONE TO IT

Illustration 9

200	217	232	249	8	25	40	57	72	89	104	121	136	153	168	185
58	39	26	7	250	231	218	199	186	167	154	135	122	103	90	71
198	219	230	251	6	27	38	59	70	91	102	123	134	155	166	187
60	37	28	5	252	229	220	197	188	165	156	133	124	101	92	69
201	216	233	248	9	24	41	56	73	88	105	120	137	152	169	184
55	42	23	10	247	234	215	202	183	170	151	138	119	106	87	74
203	214	235	246	11	22	43	54	75	86	107	118	139	150	171	182
53	44	21	12	245	236	213	204	181	172	149	140	117	108	85	76
205	212	237	244	13	20	45	52	77	84	109	116	141	148	173	180
51	46	19	14	243	238	211	206	179	174	147	142	115	110	83	78
207	210	239	242	15	18	47	50	79	82	111	114	143	146	175	178
49	48	17	16	241	240	209	208	177	176	145	144	113	112	81	80
196	221	228	253	4	29	36	61	68	93	100	125	132	157	164	189
62	35	30	3	254	227	222	195	190	163	158	131	126	99	94	67
194	223	226	255	2	31	34	63	66	95	98	127	130	159	162	191
64	33	32	1	256	225	224	193	192	161	160	129	128	97	96	65

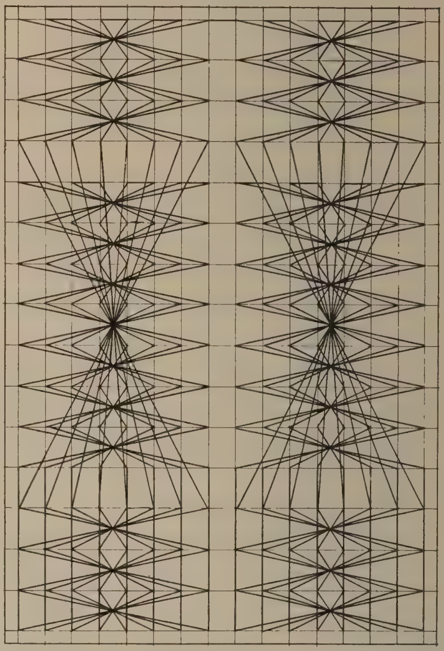
THE FAMOUS 16 X 16 "FRANKLIN" SQUARE

THE SUM OF THE 16 NUMBERS IN ANY ROW OR COLUMN IS 2056 —— THE SUM OF THE 8 NUMBERS IN HALF OF ANY ROW OR COLUMN IS 1028, OR ½ OF 2056 —— THE SUM OF THE NUMBERS IN TWO HALF-DIAGONALS IS 2056 —— THE SUM OF THE 4 CORNER NUMBERS AND THE 4 CENTRAL NUMBERS IS 1028 —— THE SUM OF THE NUMBERS IN ANY 16 CELLS WHICH ARE DISPOSED IN A SQUARE IS 2056.

NOTE THE SEQUENCES IN ALTERNATE CELLS IN HORIZONTAL ROWS ALTERNATELY FROM LEFT TO RIGHT AND FROM RIGHT TO LEFT.

NOTE THE SUMMATIONS OF CELLS IN EACH ROW EQUIDISTANT FROM THE VERTICAL AXIS.

Illustration 7

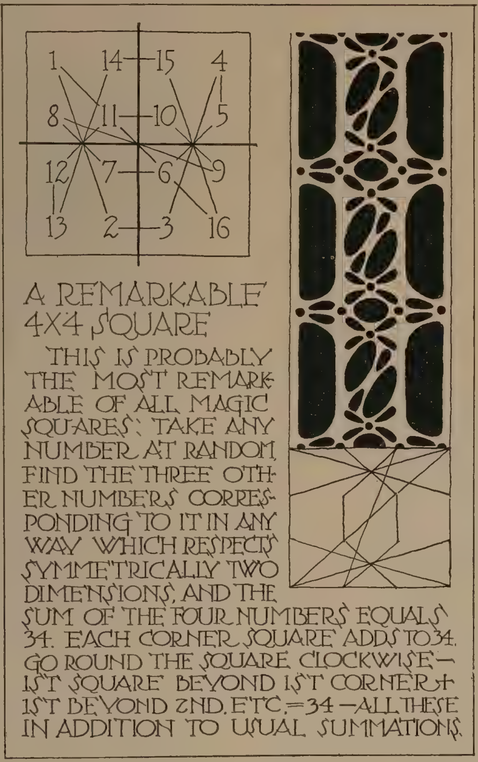


MAGIC LINE IN THE FRANKLIN 16-SQUARE BUT ELONGATED VERTICALLY ONE THIRD

Illustration 8

work" of the alchemist, the transmuting of lead into gold. Be that as it may, magic squares are conspicuous instances of the intrinsic harmony of number, and as such serve as an interpreter to man of that cosmic order which permeates all existence.

The arrangement of numbers in the form of magic diagrams was a thing known to the ancient Egyptians, and may have formed part of the knowledge which Pythagoras had from them, for such diagrams and their symbolic meanings are quite in the spirit of what we know of the Pythagorean philosophy. There is a record of a magic square in Chinese literature, dated about A.D. 1125 and it seems more than probable that its first appearance there is not the time of its invention, but rather the date of a recapitulation of vastly older accomplishments. A Hindu magic square found inscribed on a hidden portion of a lintel, was brought to light by a fall of masonry in the Chota Surange shrine at Dudhani, India, and another was discovered on the gate of the fort of Gwalior, India. A magic square appears in the celebrated engraving of Albrecht Dürer entitled "Melancholia" whose symbolism is so enigmaic and profound. (Illustration 2.) The many-sided Benjamin Franklin used to amuse himself with the construction of magic squares, one of which bears his name. (Illustrations 7, 8.)

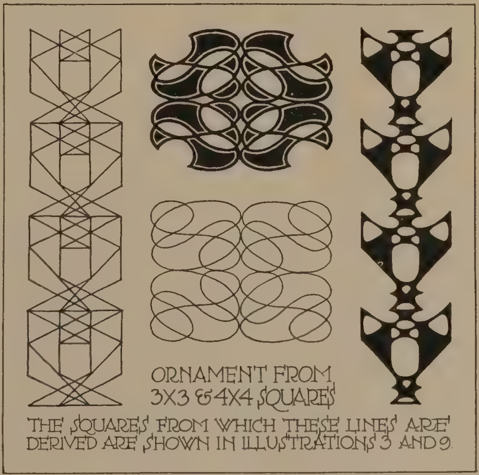


A REMARKABLE 4X4 SQUARE

THIS IS PROBABLY THE MOST REMARKABLE OF ALL MAGIC SQUARES: TAKE ANY NUMBER AT RANDOM, FIND THE THREE OTHER NUMBERS CORRESPONDING TO IT IN ANY WAY WHICH RESPECTS SYMMETRICALLY TWO DIMENSIONS, AND THE SUM OF THE FOUR NUMBERS EQUALS 34. EACH CORNER SQUARE ADDS TO 34. GO ROUND THE SQUARE CLOCKWISE— 1ST SQUARE BEYOND 1ST CORNER + 1ST BEYOND 2ND. ETC.=34 —ALL THESE IN ADDITION TO USUAL SUMMATIONS.

Illustration 10

Magic squares fall naturally into two categories, odd and even. The smallest odd number square is the 3 x 3, which consists of the nine digits so disposed in square formation that each vertical, horizontal and diagonal column adds to 15 — the magic sum. The smallest even number square is the 4 x 4, which consists of 16 numbers, with a magic sum of 34.* The methods of construction of even squares are different from those which govern odd magic square formation. These methods are many and various, but in general it may be said that the principle involved is that of reversal or rotation — some manner of manipulation of the regular numerical sequence which shall effect those compensations whereby the numerical balance—indi-



ORNAMENT FROM 3X3 & 4X4 SQUARES

THE SQUARES FROM WHICH THESE LINES ARE DERIVED ARE SHOWN IN ILLUSTRATIONS 3 AND 9.

Illustration 11

---

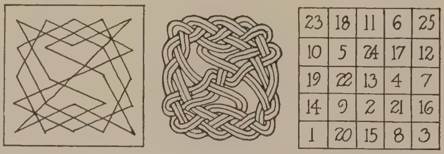
*The formula for obtaining the magic sum for either odd or even squares is as follows: Let m represent the number of rows, n the number of cells, and x the magic summation.

$$\text{Then: } x = \frac{mn}{2} + \frac{m}{2}$$

cated by the magic sum—is maintained in all directions at once. The process has a certain analogy with the making of "string figures." If, for example, the numbers from 1 to 10 be thought of as ten equally spaced knots in a cord, and that cord be then looped back upon itself until the two ends come together, 10 will be opposite to 1, 9 to 2, 8 to 3 and so on, and each of the five pairs will therefore yield the same "magic" sum, 11. Exactly similar results obtain when, with a longer string of numbers this process is carried farther — out of one dimension into two—with the result of forming a more intricate "cat's cradle." Always there results a sort of polarization whereby the mathematical balance is maintained. Such manipulations involve rotation in the third dimension, the transcending, therefore, of flat space. As a friend, skilled in magic square formation, wrote in a letter: "I have always felt that magic squares were evidence of motion through a higher dimension—to put it in terms of your book, that a man living in flatland would consider them evidence of the existence of a third dimension, just as I regard the magic cube as the result of revolution through the fourth dimension."

DESIGN FOR A VENTILATING REGISTER DERIVED FROM THE MAGIC LINE OF THE MAGIC SQUARE OF 3

Illustration 12



23	18	11	6	25
10	5	24	17	12
19	22	13	4	7
14	9	2	21	16
1	20	15	8	3

A 5X5 KNIGHT'S MOVE SQUARE & DERIVED ORNAMENT IN THE FORM OF AN INTERLACE

Illustration 13

EIGHT DIFFERENT 5X5 MAGIC SQUARES USED AS A BASIS FOR TEXTILE PATTERN

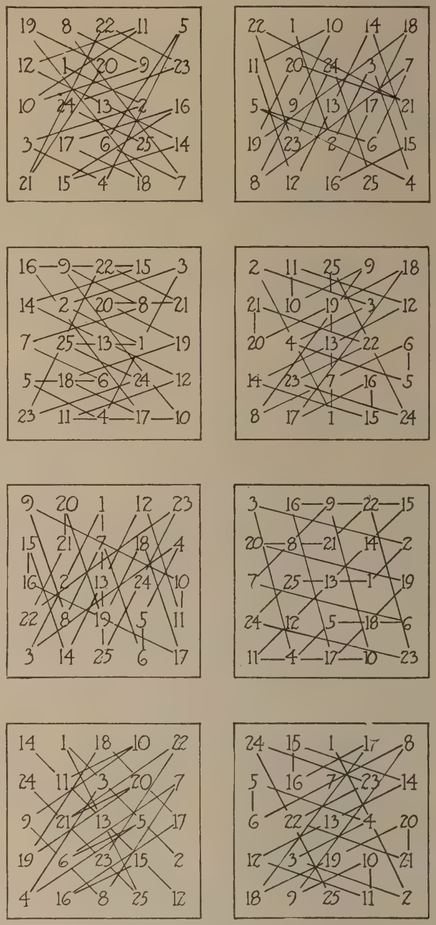


Illustration 14

To go at all deeply into the subject of magic square formation is outside the province of this essay. The reader who is desirous to become proficient in this field has only to consult the encyclopædia, or provide himself with W. S. Andrews' monograph entitled, "Magic Squares and Magic Cubes." Not to leave him utterly in the dark, however, examples of odd number magic square formation are given in illustrations 3, 4 and 5. Illustration 3 represents the 3 x 3 square, and illustration 4, a 5 x 5 square constructed according to the same method, which is as follows: The numbers are first written in their natural order in diagonal columns, equally spaced and of equal

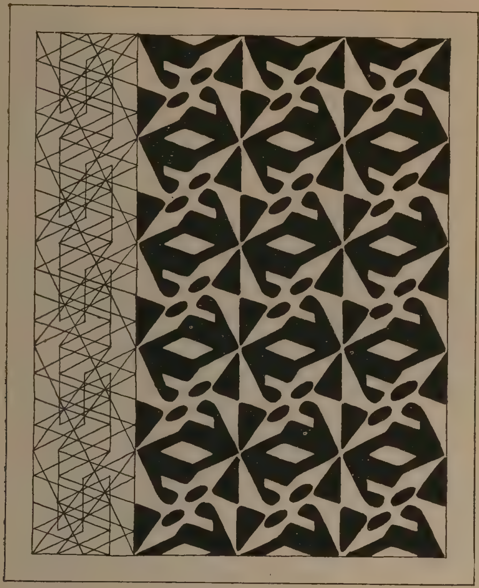


Illustration 15

length so that the whole forms a square. Vertical and horizontal lines are then drawn between these numbers with the effect of outlining a square of the required number of cells, each alternate cell being a blank. These empty cells are then filled by transferring the numbers remaining on the outside of the square to the corresponding cells on the inside. They should be thought of as *lifted* into the third dimension from their original position, and set down with a half-turn in their ultimate position, opposite the first one, but inside the square—for, as before stated, it is an aid to the mind to realize that all magical numerical arrangements involve rotations in a higher dimension.

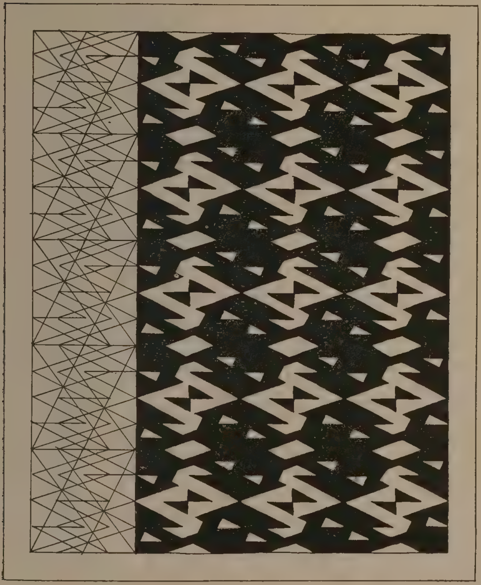


Illustration 17

Illustration 5 shows a 5 x 5 square constructed according to a different method, based upon what is known as the knight's move. To chess players this move will require no explanation, but for the benefit of those who are unacquainted with the characteristic moves of the various pieces, it may be described as a move of two squares straight forward in any direction and one square either to right or to left. In the square shown in the illustration the movement is upward and to the right. Knowing this much the process becomes clear by a little study of the diagram. By varying the direction of the knight's move other magic squares may be constructed according to this method. The move may

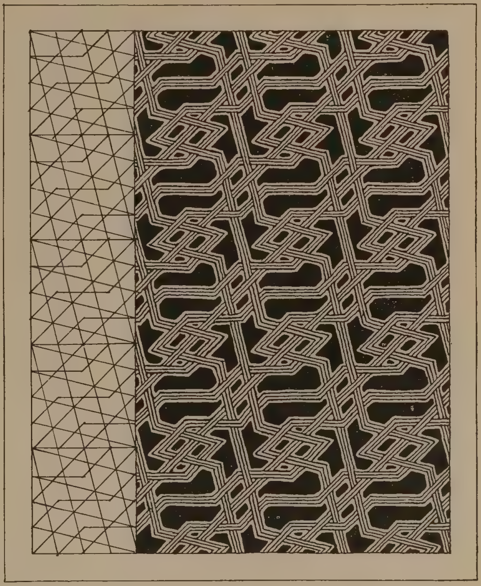


Illustration 16

be upwards to the left hand instead of to the right, or it may be downwards and either to the right or left hand, and also in other directions. There are in fact eight different ways in which the knight's move may be started from the center cell in the upper line. Six of these moves are indicated by figure 2's in different cells in illustration 6, and each of these moves, if continued in its own direction, varied by regular breaks, will produce a different but a perfect square. This "break," or departure from the normal progression occurs whenever, following that progression, a cell is encountered which already contains a number: then the new number will be written in the cell immediately below—the break will be one cell downwards, in other words, but only for magic squares whose first number, like this one, is in the center of the top row. Squares based upon the knight's move may be commenced in any cell except the center one, and perfect squares may be built up from such commencements by a great variety of regular moves, such as a right hand diagonal sequence, upward or downward, or a number of knight's moves in different directions.

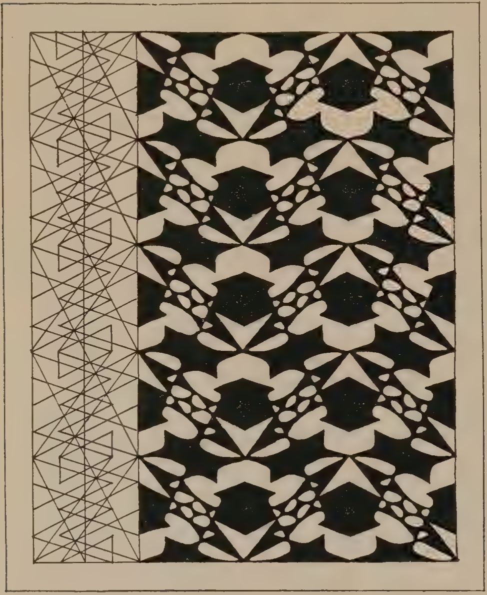


Illustration 19

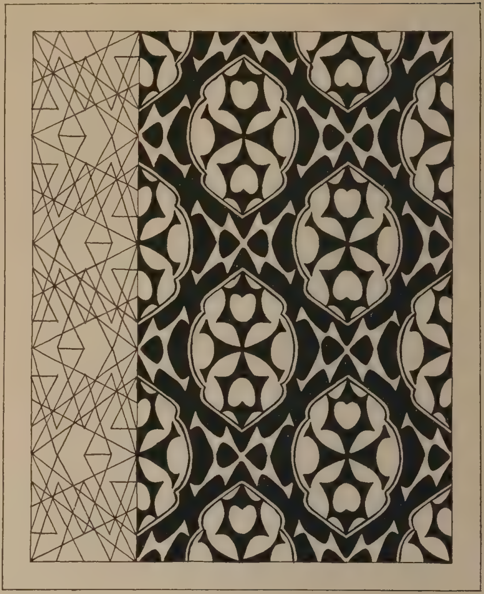


Illustration 18

To a mind unused to the marvel and mystery of mathematics it may seem sufficiently remarkable that there should be even one possible arrangement of the numbers from 1 to 16 (let us say) in square form, in which the horizontal, vertical and diagonal columns would

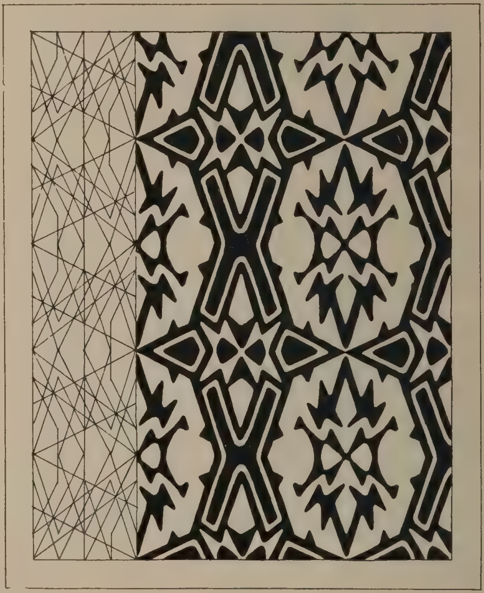


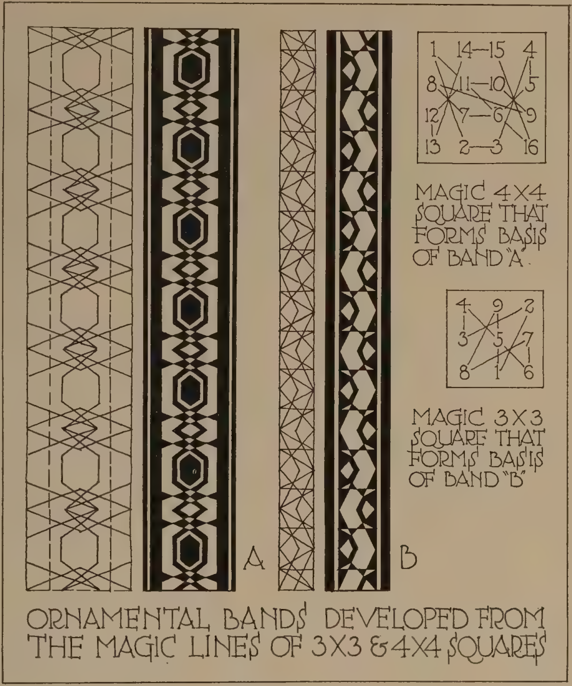
Illustration 20

yield the same sum—34, but it has been estimated that there are no less than 384 arrangements of these numbers in this form which yield this same result, and no person living knows in how many ways it is possible to form a magic square of any order exceeding 4 x 4. Moreover, many squares possess, in addition to the usual and required summations, "supermagic" properties of the most amazing sort. The "Franklin" Square shown in illustration 8 is an example, and in illustrations 9 and 10 two of the most remarkable 4 x 4 supersquares are shown, and their properties enumerated.

All very interesting, the reader is doubtless by this time saying to himself, but clearly the mathematician has run away with the artist, let him perform his miracle—if he has one to perform —without any more ado.

Very well! Now every magic square contains a magic line. This is developed by tracing the numbers in their natural sequence from cell to cell and returning to the point of departure. This forms a linear pattern often possessing great intrinsic beauty —not ornament exactly, but the raw material of ornament. At all events the chasm between number and form has been somehow bridged—an interesting mathematical fact has been made apprehensible to the eye as well as to the mind. All that remains is to deal with these magic lines in such a way that they may be made to subserve æsthetic ends.

Illustration 3 shows the magic line of the 3 x 3 square made not with straight lines, but with a free-hand curve. So rendered it forms an admirable motif for ornament. Illustration 11 shows one of a number of ways in which it may be thus used, and illustration 12 another in which it actually has been—as a ventilating grille in the ceiling of the Rochester Chamber of Commerce. This interlace idea is the most direct and obvious method of translating magic lines into ornament. Such interlaces much resemble the designs found on Irish crosses and elsewhere. Indeed the pattern derived in this way from Euler's knight's move square of 5 x 5, and shown in illustration 13 would probably be put down as Celtic ornament if encountered anywhere but on this page.



1 14 15 4
8 11 10 5
12 7 6 9
13 2 3 16
MAGIC 4X4 SQUARE THAT FORMS BASIS OF BAND "A".
4 9 2
3 5 7
8 1 6
MAGIC 3X3 SQUARE THAT FORMS BASIS OF BAND "B"
A
B
ORNAMENTAL BANDS DEVELOPED FROM THE MAGIC LINES OF 3X3 & 4X4 SQUARES

Illustration 21

But notwithstanding the inexhaustible richness of the field, nothing can save these interlaces, however intricate and felicitous, from an ultimate monotony, due to their "one dimentionality"—the fact is that there are not a sufficient number of elements involved for contrast and variety. Filling in the interstices with floral forms, as in illustration 12, is a mere makeshift. The true path to a successful use of the magic line lies in another direction, one in which the creative faculty has freer play. Illustrations 15 to 21 variously show forth this method, which consists in using magic lines, repeated and reversed in chess-board fashion, as a warp upon which may be woven any kind of a pattern, the geometrical web acting both as a guide to fancy and a check imparting to the design a certain orderliness. The creative faculty is not put in a straight-jacket, neither is it left utterly and helplessly free and without guidance, but it is put in harness as it were, and made subject to a control and direction which, because it is mathematical, makes for beauty because of an inherent *orderliness*.

The number of magic lines at the disposal of the designer for use in this way is practically infinite, and each individual "web" is capable of producing many different patterns. Here therefore is a foundation broad enough, and by reason of its mathematical integrity also strong enough to serve as the footing of one pier, at least, of that Palace of Art, which, when we are through with all our shifting and shuffling, our cubisms and our copyisms, we must begin to build if we would leave a recognizable record on the historic scroll.

But it is only a foundation—a point of departure. I claim for it no more than that. When I first came upon this "source" twelve years ago, I thought I had made a great discovery, and under the stimulus of this I published "Projective Ornament." That the theory is sound I still believe, but the illustrations I had then to offer were not beautiful enough to be convincing. What I hoped for was that others would develop the system to a point higher than I had reached or could reach. That hope was disappointed. The designs shown in Projective Ornament have been widely—and badly—copied, but no one apparently has been sufficiently interested and impressed to develop the patience and the courage required to build up from the bed-rock of mathematics a new ornamental mode. From time to time I have tried to supplement the deficiencies of my book by essays such as this, and to extract a more convincing beauty, still animated by the hope that others, more richly endowed than I, would profit by my discovery. That hope still lives.

The DEEPDALE GOLF and COUNTRY CLUB, GREAT NECK, LONG ISLAND

WARREN & WETMORE, ARCHITECTS

By

Ronald H Pearce

THE DEEPDALE GOLF AND COUNTRY CLUB was created to provide a championship course within thirty minutes' ride of New York, membership of which was limited to a total of one hundred in order to avoid that delay in commencing play which is so often a feature of the average crowded course.

This limitation in number of the members proved to be the controlling factor in the design of the clubhouse.

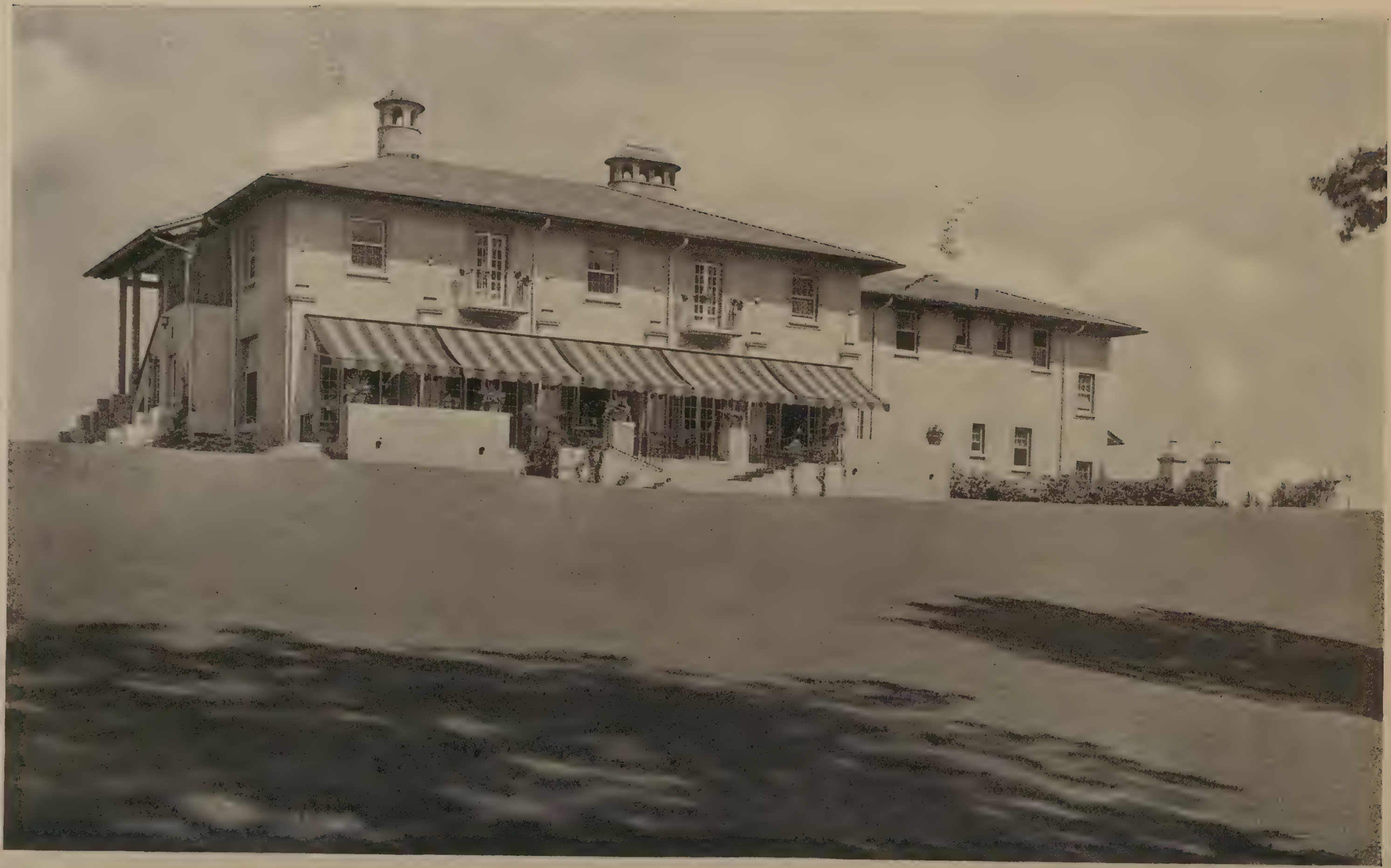
In laying out the course, the clubhouse had to be adjacent to the first tee and the eighteenth green and also have the ninth green and tenth tee nearby. In combining these necessary details, however, another desire was borne in mind, namely, to have the clubhouse face the lovely lake which forms a special feature of the grounds, thereby giving a pleasant outlook and ensuring to the important rooms the cool southwest breeze of summer as well as the sun's warm rays in the colder months.

There are many beautiful trees about the course, but none existed on the immediate site where the clubhouse was built as it had previously been a hay field. During the Fall, however, many trees and large shrubs were planted around the entrance and service wing, materially improving the immediate surroundings of the house. This improvement, unfortunately, is not shown in the accompanying illustrations, photographs for which were taken soon after the opening of the course in June.

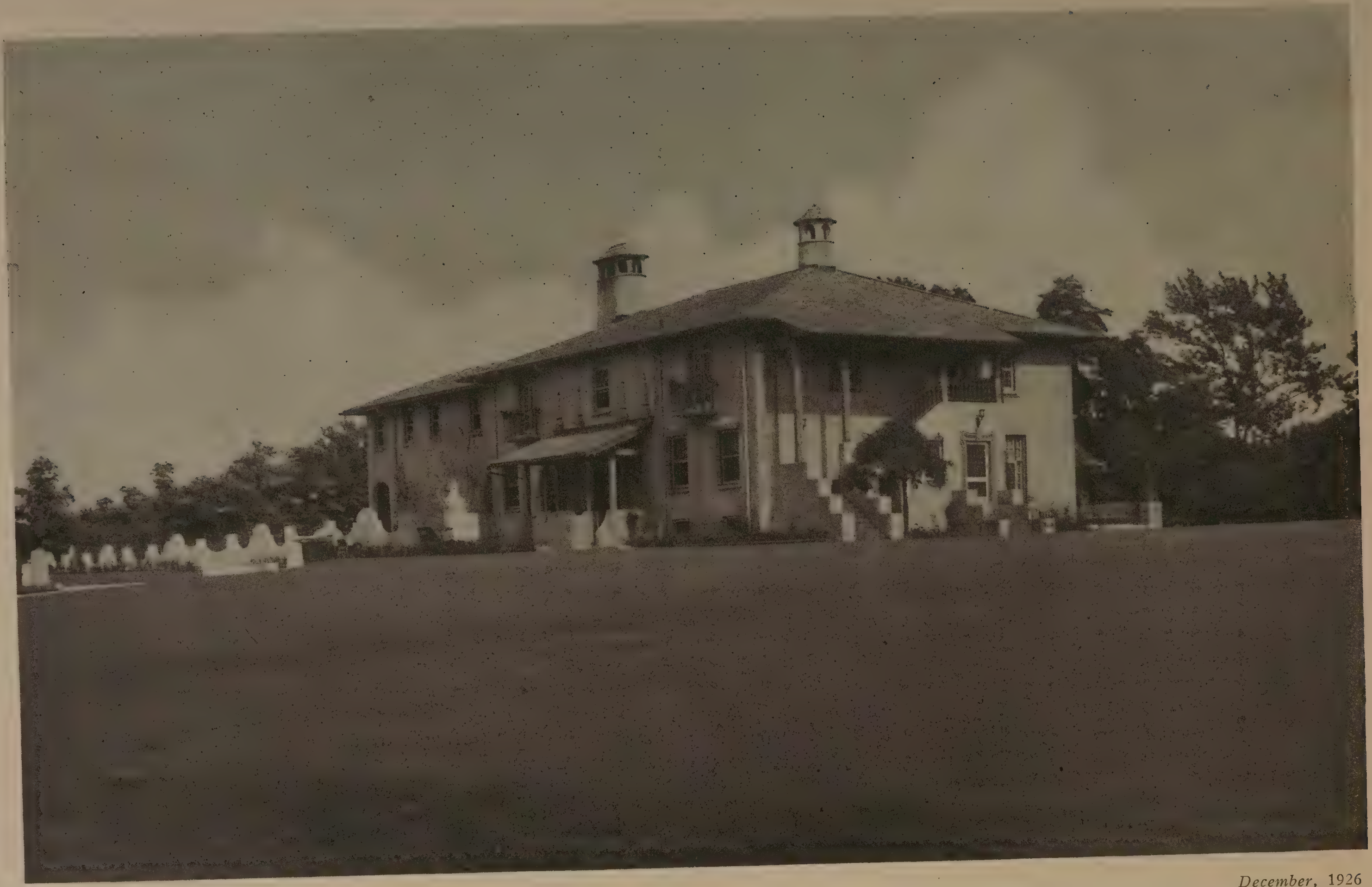
The ground to the south was graded to a gentle slope from the terrace to the lakeside where sufficient trees already existed. In fact it was found necessary to cut away some of the growth to obtain a view out over the water.

The architects were fortunate in being allowed not only to design the clubhouse with its immediate surroundings including the entrance drives, walls and planting, but to design also the entire interior furnishings.

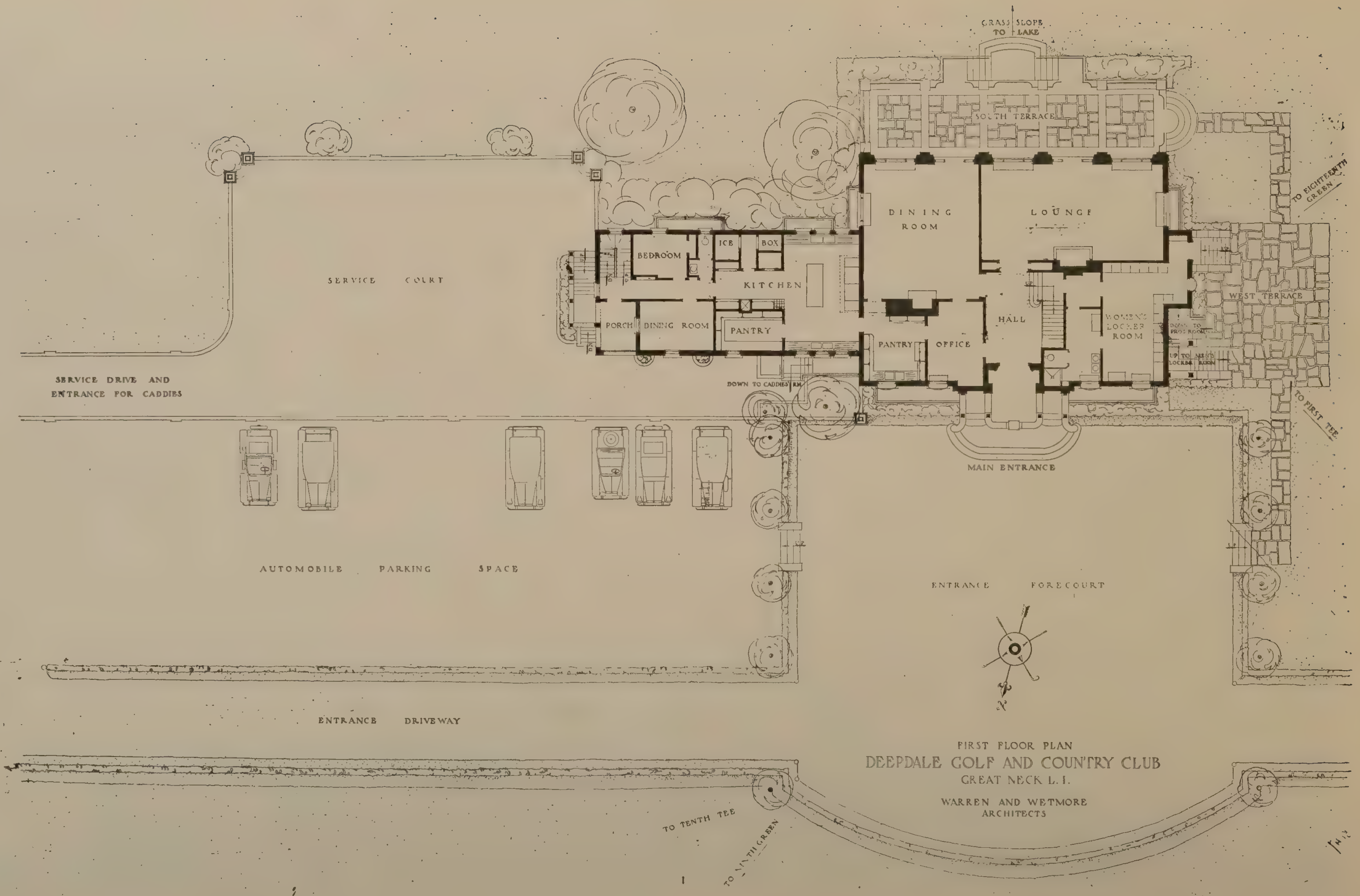
One can hardly claim that any gen-



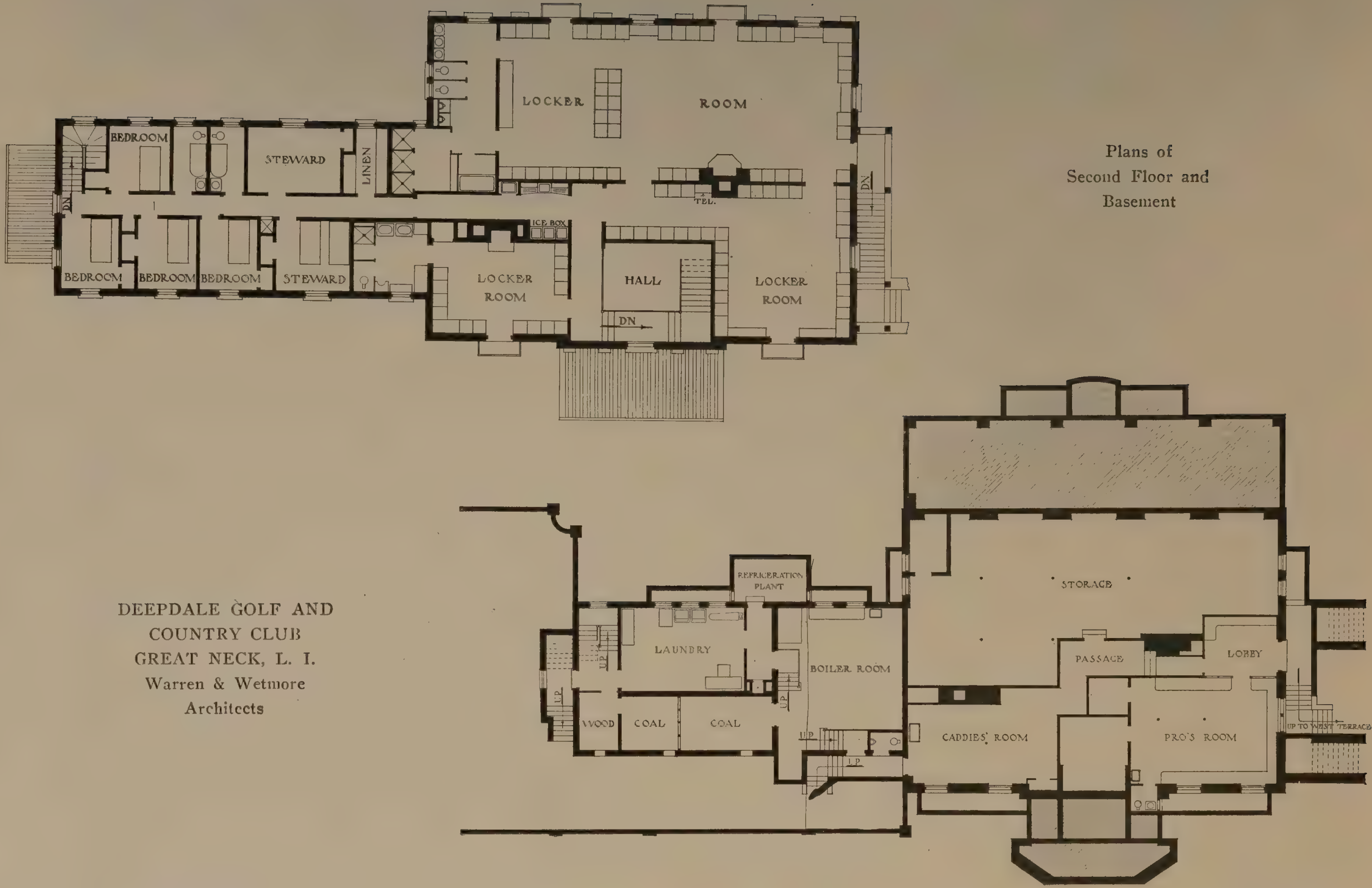
South Elevation from the Edge of the Lake
THE DEEPDALE GOLF AND COUNTRY CLUB, GREAT NECK, LONG ISLAND
Warren & Wetmore, Architects



Club House from the First Tee
THE DEEPDALE GOLF AND COUNTRY CLUB, GREAT NECK, LONG ISLAND
Warren & Wetmore, Architects

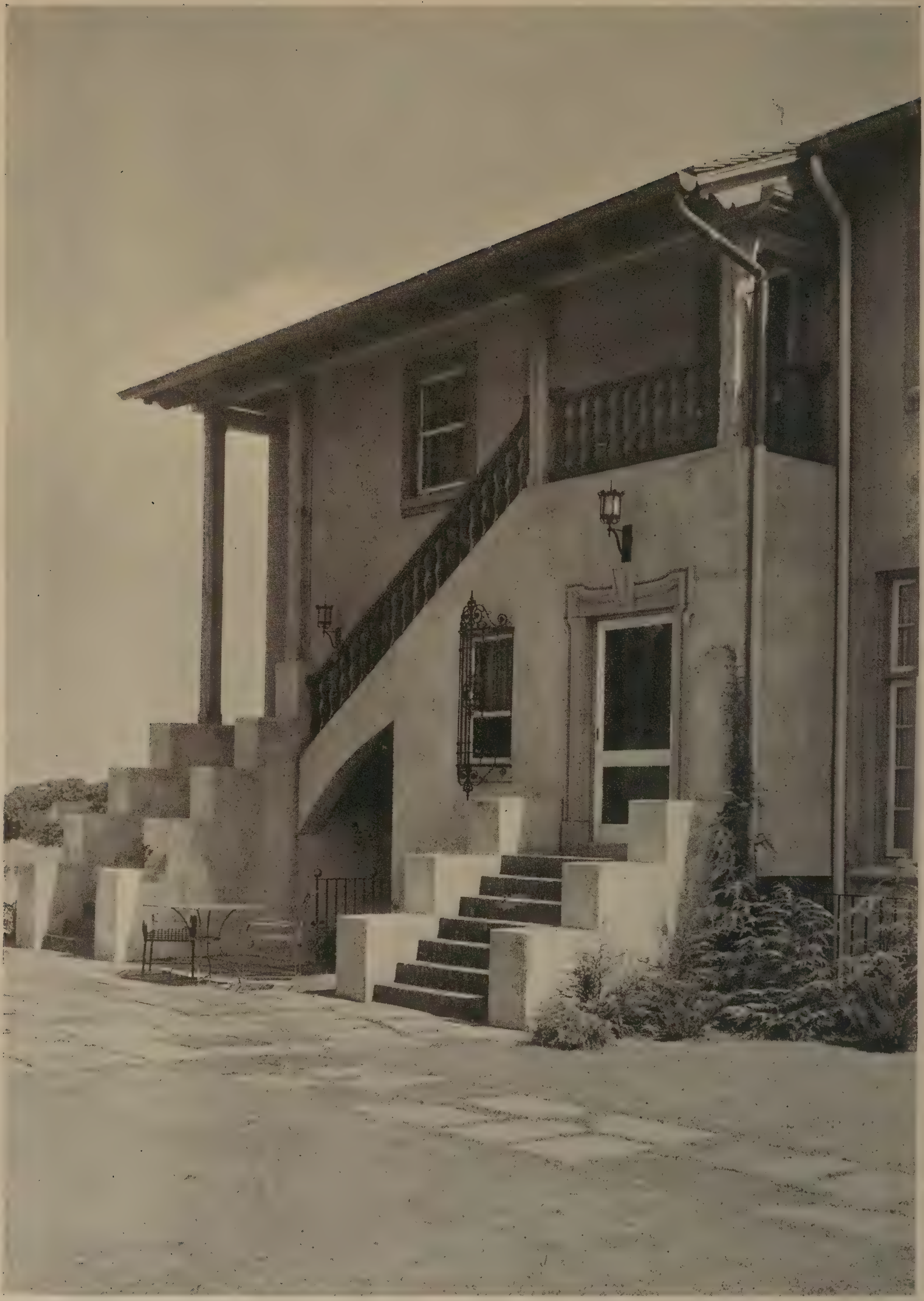


FIRST FLOOR PLAN
DEEPDALE GOLF AND COUNTRY CLUB
GREAT NECK L. I.
WARREN AND WETMORE
ARCHITECTS



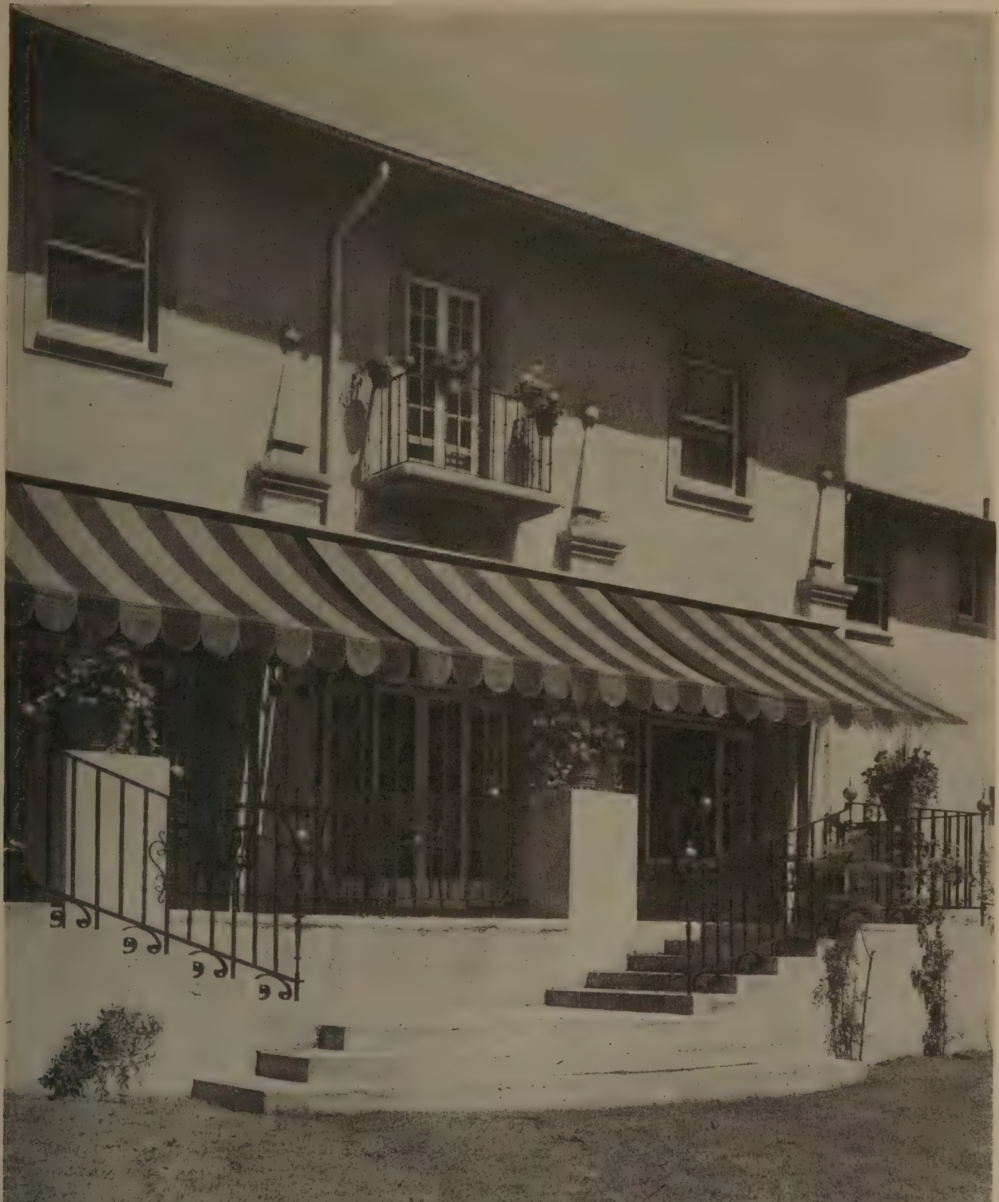
Plans of
Second Floor and
Basement

DEEPDALE GOLF AND
COUNTRY CLUB
GREAT NECK, L. I.
Warren & Wetmore
Architects

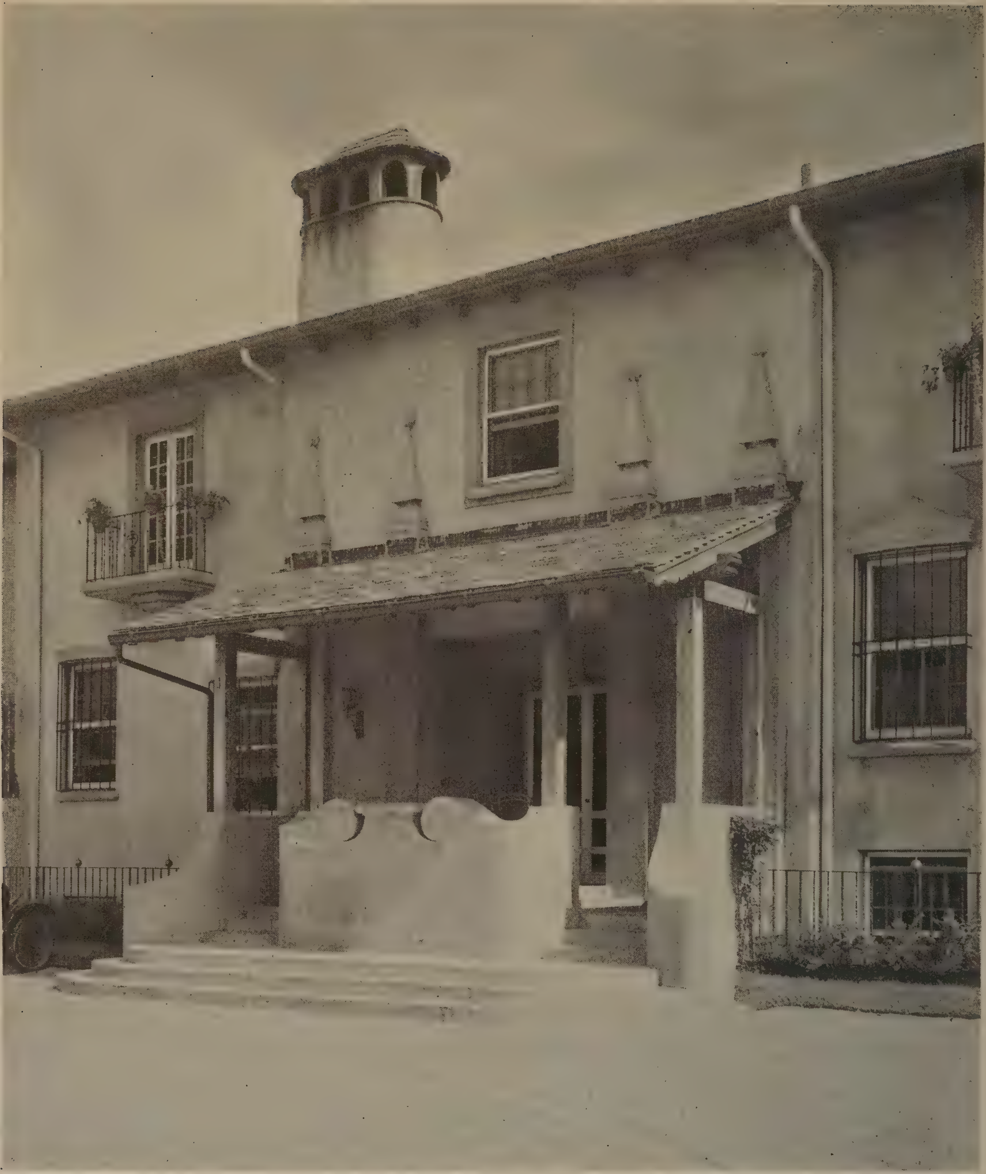


West Elevation, Showing Outside Staircase to the Men's Locker Room and Entrances to Pro's Room and Women's Locker Room

THE DEEPDALE GOLF AND COUNTRY CLUB, GREAT NECK, LONG ISLAND
Warren & Wetmore, Architects



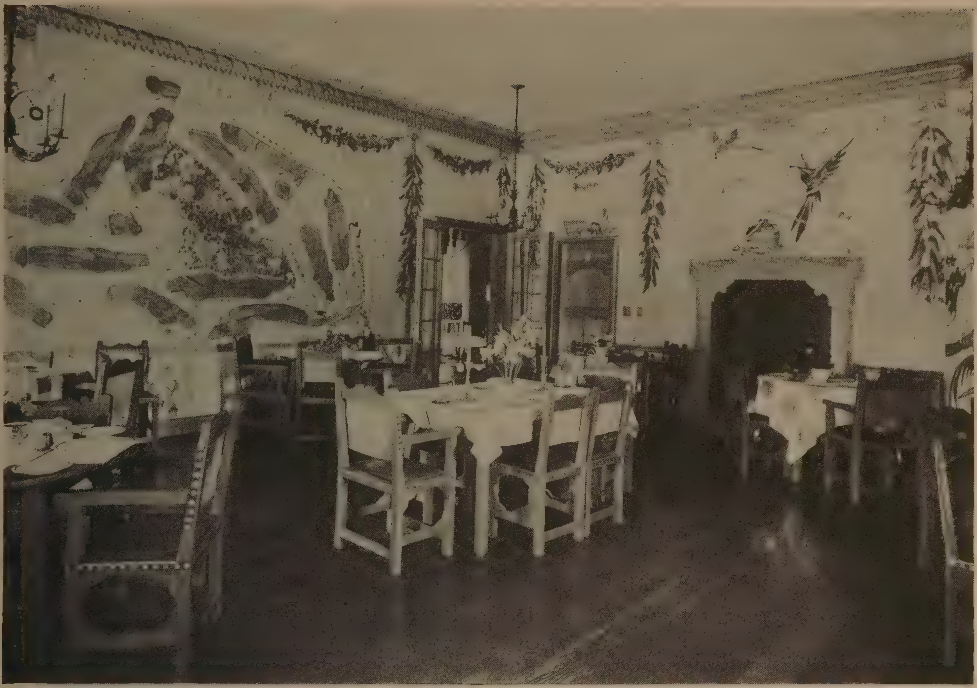
Detail of South Terrace
THE DEEPDALE GOLF AND COUNTRY CLUB, GREAT NECK, LONG ISLAND
Warren & Wetmore, Architects



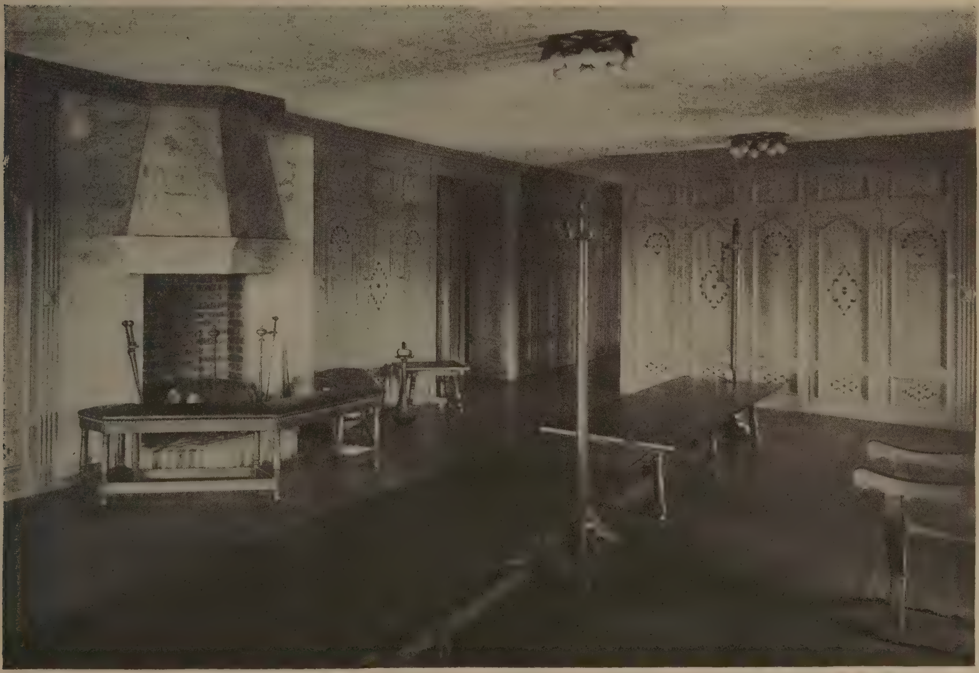
Main Entrance
THE DEEPDALE GOLF AND COUNTRY CLUB, GREAT NECK, LONG ISLAND
Warren & Wetmore, Architects

eral so-called "style" has been followed or carefully copied. Possibly it is truthful to say that a trip in the Pyrenees gave the general idea and the rest of the design followed in carrying out the requirements—the principal one being a request not to plan a typical American Country Club but rather a building more like a private country house in which the members would feel at ease to do as they wished.

From the accompanying plans it will



Dining Room



A Locker Room

THE DEEPDALE GOLF AND COUNTRY CLUB, GREAT NECK, LONG ISLAND

Warren & Wetmore, Architects

be seen how the main entrance drive arrives at the forecourt on the north side. Running parallel is the automobile parking space, behind which is the service drive enclosed by concrete walls built to screen the rear entrance as well as to form a barrier to the parking space. There is also a service yard in which the caddies can play, thereby eliminating the caddie house and its objectionable features. The caddies can pass from this service yard into a caddie room in the basement and, when wanted, can continue through the basement and on out to the west terrace to meet the players as they come from their locker rooms. The professionals' room is also in the basement with a high ceiling assuring ample light.

One enters—on the first floor—a medium size hall, finished in fairly rough plaster, somewhat of the color of Travertine stone. The woodwork here as in most of the interiors, is finished in the color of natural weathered oak, containing a great deal of silvery gray with a slight hue of red. To the left is the steward's office and the dining room; straight ahead the lounge, and to the right are the women's dressing and locker rooms. As this locker room has a northern exposure, it is painted a bright yellow. The treatment of the walls in the lounge is similar to the hall. The curtains on the many windows harmonize in color with the plaster and the bright colors were reserved for the furniture coverings and rugs.

Dining rooms in country clubs are often spots in which one eats and escapes from as soon as possible owing to the lack of any personality connected with them. Attempting to overcome this situation, the entire walls were frescoed with gay mural decorations using subjects that are seen hanging in almost any simple courtyard in Spain, such as ripe corn, melons, peppers, etc., with a painted tile wainscot, and on one entire wall the golf course is accurately laid out on a large scale, showing the number of yards to each hole, traps, water hazards, the correct line a player should make to escape all these, etc., so that after a morning spent on the links, a group of members at lunch can "fight" out their round all over again and check up each other's shots and total scores.

It was originally intended to import the dining room furniture from Cuba, made of Majagua wood. This was found to be impractical and the furniture was made in New York by copying the Cuban models; it was finished in green with natural color sole leather backs and seats. The table linen is of French Normandie linen in green and white checks and the table service is also carried out in green and white.

The open terrace to the south adjoining the dining room and lounge connected by large windows is constantly used, both to dine and sit upon.

Particular attention was paid to the service portion where high ceilings and cross ventilation assure comfort for the employees at all times. The kitchen equipment includes both electric and coal ranges and a complete automatic ice making and refrigerating plant with brine coils to each compartment of each refrigerator; the kitchen refrigerator is divided into large separate compartments for meat, vegetables, milk, fish, etc. Ample pantries connecting with the kitchen make possible perfect service at all times.

As this is primarily a man's club, women are excluded from the second floor, and instead of having one large locker room, there are three, allowing groups of members, if they so desire, to occupy different rooms. To make these locker rooms attractive, fireplaces were introduced and the walls paneled in wood. Each section of paneling conceals two lockers, one large and the top one small, each with a floor area of approximately two feet in both directions, giving ample storage accommodations. Most of the furniture is oak with the benches in black with red graining beneath the final glaze, and the curtains are of a striped linen in yellow, red and gray.

Ample dressing rooms with all the necessary toilet arrangements are provided off the locker room.

Since there are not any bedrooms for members or guests, the second floor of the service wing contains the necessary servants' rooms.

THE COLONIAL COURTHOUSE CHESTER, PENNSYLVANIA

Restored by Clarence Wilson Brazer, Architect

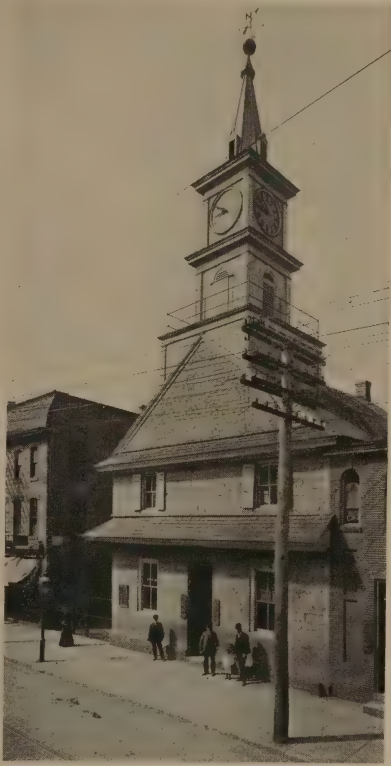
The Colonial Court House, of what was then Chester County, was erected in 1724, on the west side of Market Street between Fourth and Fifth Streets in Chester (Delaware County), Pa.

The building was erected under the Act of the Assembly of 1723-4, Chapter 242, under which Trustees were appointed and instructed that "£400 be put into the hands of the Treasurer of the County of Chester and that £300 thereof be applied towards building the Court House at Chester."

By vote of the Assembly 11 mo. 4,1722-3 "Lion or Dog Dollars weighing 16 pwt shall pass for 5s." This would apparently place the original cost of our Court House at one thousand two hundred "Lion or Dog Dollars."

So far as known it is the oldest public building still standing in the State of Pennsylvania and was occupied continuously for public purposes until 1919, when, at the personal expense and direction of the Honorable William C. Sproul, it was restored to its original condition, and is now open to the public as a historic relic.

After several years of research by the architect for documentary data in the old county, state and private records, a studious dissection of the then existing building was begun. Traces of the original stone floor were found and the original wainscoting, etc. After removing three coats of plaster unmistakable marks were found on the original plaster as to the original staircase, chair-rail, partitions, fireplaces, etc., all of which were restored so as to exactly fit the old recesses.

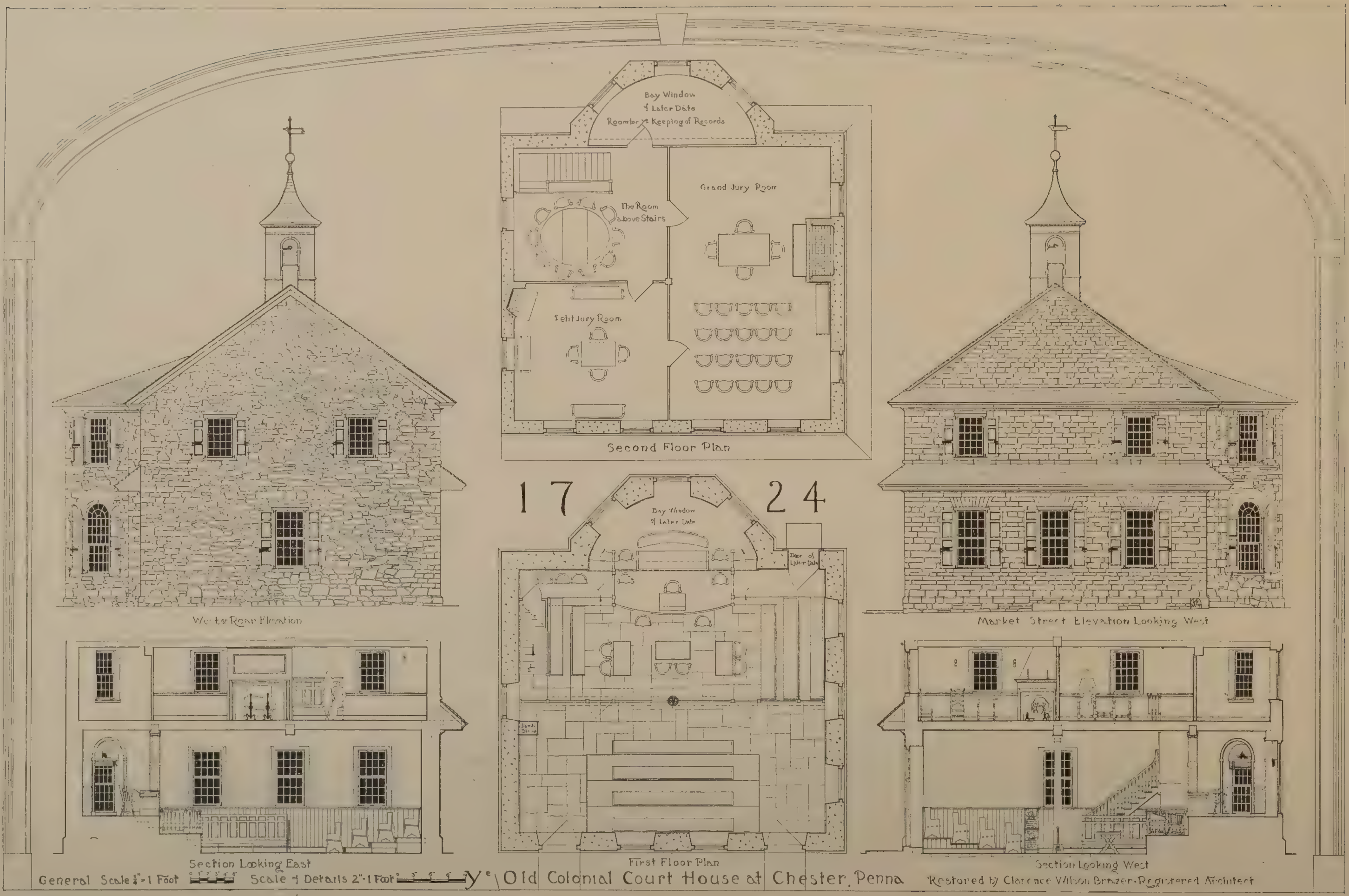


The Chester Court House Before Restoration in 1918

Several minor details of convenience of later periods were retained as found, such as the 19th Century door giving access to the Judges' Rostrum. The Judges' bay is of a later date (perhaps circa. 1760), than the original building and probably replaced a slighter segmental projection in the same location for which traces of foundations were found.

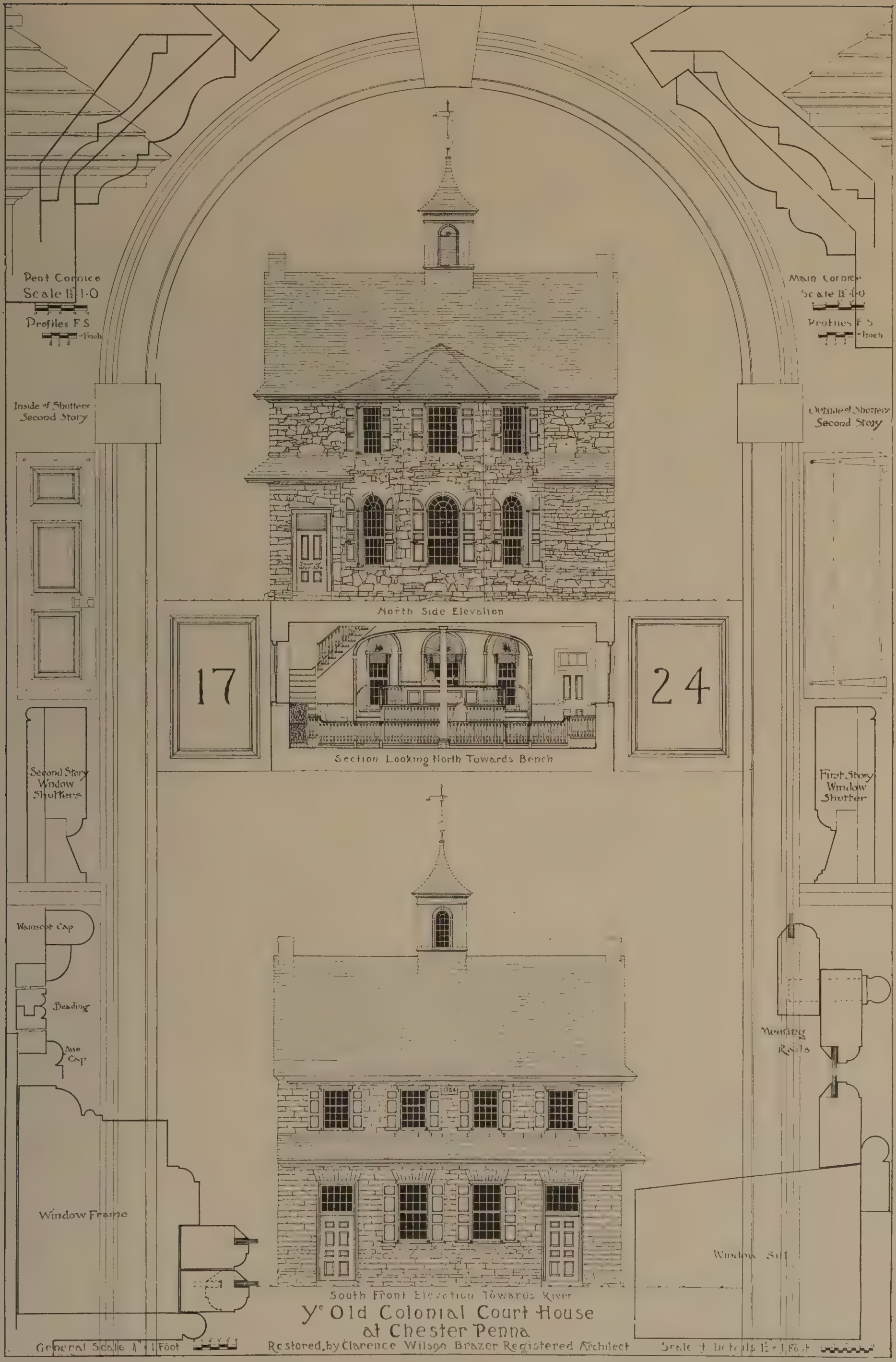
The Judges' bench, railings and Jury benches were restored from the collaborative memory of old residents who remembered the condition of the building before it was modernized and much altered in 1857. Slight changes shown in the measured drawings, where different from the photographs, show what is more likely to have been the original treatment when viewed in the light of later information.

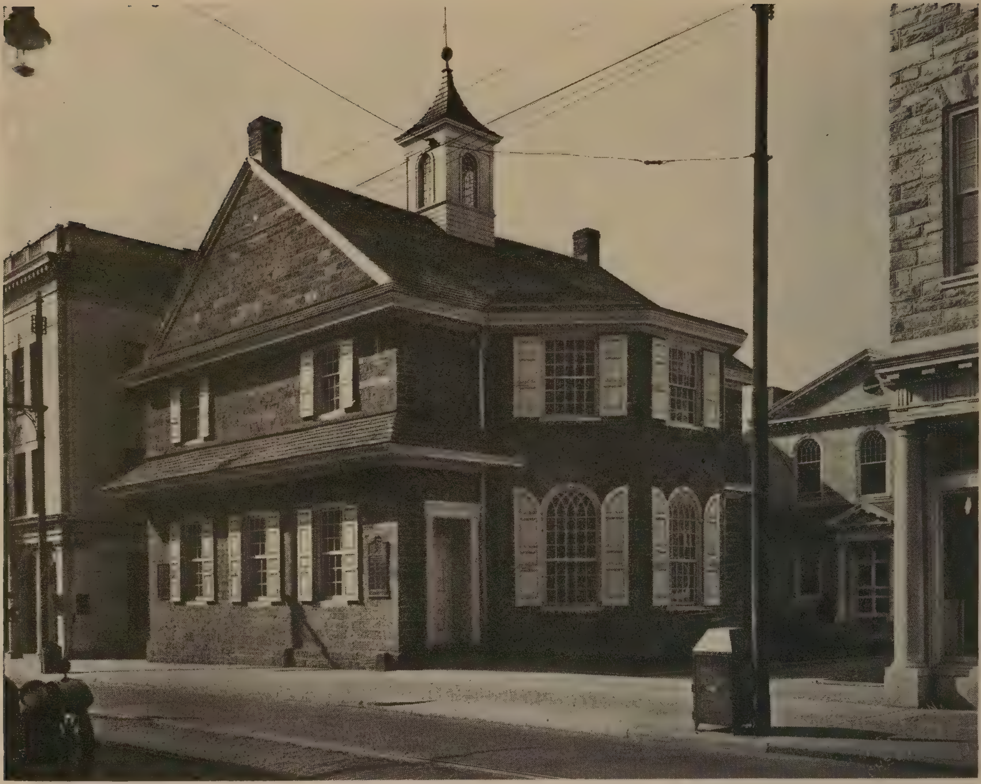
A bronze tablet placed by the Delaware County Chapter of the Daughters of the American Revolution concisely states the History of this Building as follows:



Ye Old Colonial Court House at Chester, Penna

Restored by Clarence Wilson Brazer-Registered Architect


Pent Cornice
Scale 1½ = 1-0
Profiles F S
Main Cornice
Scale 1½ = 1-0
Profiles F S
Inside of Shutters Second Story
Outside of Shutters Second Story
North Side Elevation
17
24
Section Looking North Towards Bench
Second Story Window Shutters
First Story Window Shutter
Wainscot Cap
Beading
Base Cap
Meeting Rails
Window Frame
Window Sill
1724
South Front Elevation Towards River
Ye Old Colonial Court House
at Chester Penna
Restored by Clarence Wilson Brazer Registered Architect
General Scale ¼" = 1 Foot
Scale of Details 1½ = 1 Foot



THE COLONIAL COURT HOUSE, CHESTER, PENNSYLVANIA
Restored by Clarence Wilson Brazer, Architect

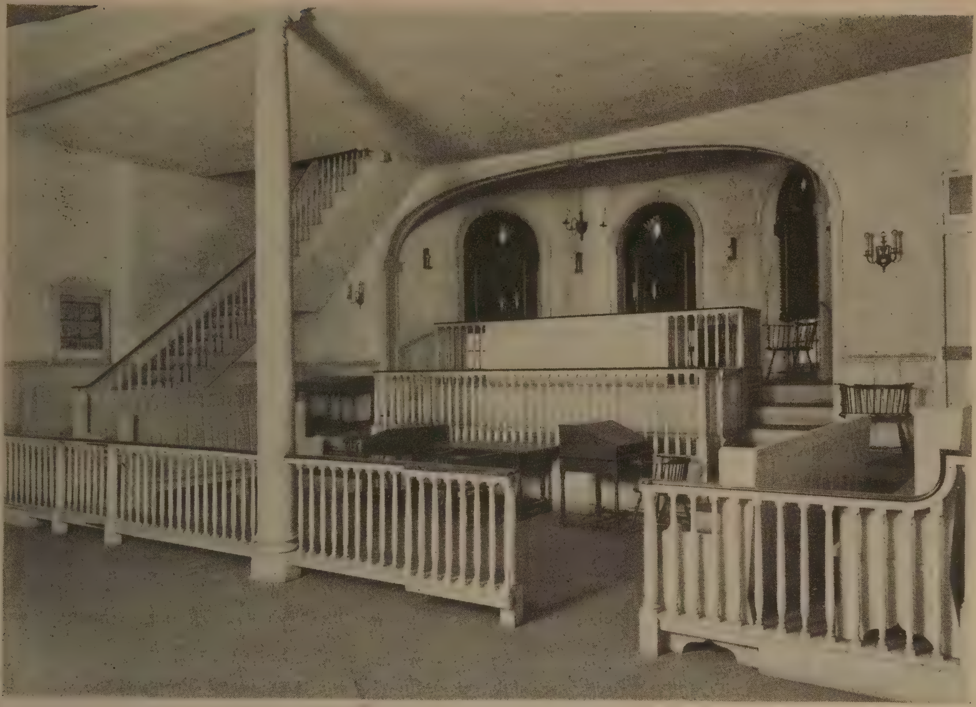
THIS BUILDING WAS ERECTED 1724 DURING THE REIGN OF GEORGE I OF ENGLAND. IT WAS THE COURT HOUSE OF CHESTER COUNTY, 1724-1786; COURT HOUSE OF DELAWARE COUNTY, 1789-1851; HALL OF CHESTER BOROUGH, 1851-1866; HALL OF CHESTER CITY SINCE 1866. IN 1739 ENGLAND DECLARED WAR AGAINST SPAIN, AND SOLDIERS WERE HERE ENLISTED FOR AN EXPEDITION TO CUBA. HERE ANTHONY WAYNE RALLIED AND DRILLED HIS TROOPS, JANUARY, 1776. IN 1824 LAFAYETTE, AS GUEST OF THE NATION, WAS ENTERTAINED IN THIS BUILDING.

Among the documents discovered by the architect in his research are the following interesting petitions which describe the deplorable condition into which the building and its contents had fallen within a dozen years after its erection. Apparently the public's property had no efficient caretaker, and the petitioner was thereafter given that duty as Clerk of the Court and Sheriff of the County.

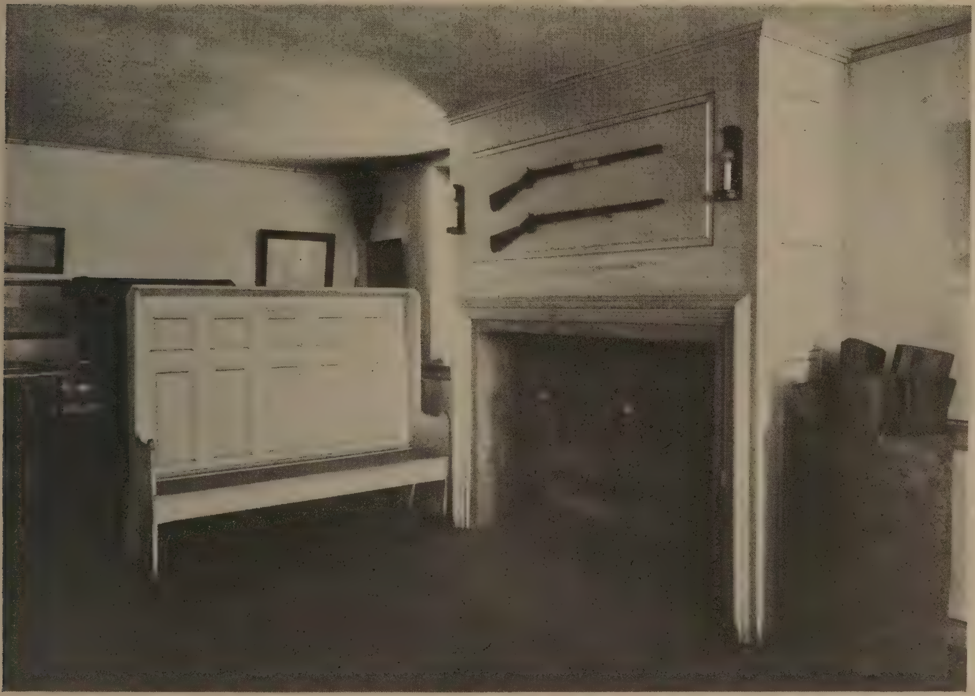
The Petition of Joseph Parker of Chester Humbly Sheweth

That Whereas your Predecessors as the Guardians of the Publick found an absolute Necessity for Erecting a Court house with other Buildings for the better accommodating the administration of Justice which said Court house was at the Publick Expense furnished with Tables, chairs, fireshovels, Tongs, Doggs, Fenders, so many as was Reasonably Adjudged Necessary. But whoever the Person that charge the same was Committed to It is Apparent to Every Person that will make use of his Eyes, that the Doors are most Commonly left Open for Horses and Cattle to go in and out at Pleasure, the Furniture broke and Exceedingly Diminished and the place made a Common Stage whereby Rude people break the Windows, Treads down Ceiling and Commits many Disorders which if not timely prevented must end in the Ruin thereof.

I am your Friend to Command.
January 24th, 1737. JO PARKER.



Main Court Room



Grand Jury Room

THE COLONIAL COURT HOUSE, CHESTER, PENNSYLVANIA

Restored by Clarence Wilson Brazer, Architect

Joseph Parker's Petition produced the following results.

"Memorandum that the Commissioners & Assessors of Chester County have ye 1st day of March 1737-8 *agreed with John Owen to repair the Court House after the Manner herein Mentioned (Viz.) The lower floor and the Bar and to provide Convenient Seats for the Petty Jury to Sitt on, when in Court, and to repair the windows and Shutters below Stairs and above and the Chimney case in the Grand Jury room and to repair the Three Tables belonging to the Several rooms above stairs and the Benches, and to fix a Turn'd Column or Pillar to Support the Ceiling where the Bell rope comes thro, and to cause the Ceiling to be repaired, and to Provide as many Boards as may lay a floor over that sd ceiling and to make and put up Shutters for the Belfry (or place where bell hangs) and likewise to make a window in the Gable End in the Garret or upper Room and glaze the same, and to endeavor to procure (with the help of Joseph Parker) the Chairs that is wanting belonging to the Court House as also the Tongs and Fire Shovels, and the Said John Owen accomplish or cause to be accomplishd the above sd respective articles by the first day of Next May. Court to be held at this County of Chester, March ye* 1, 1737-8. *In consideration of the performance of the said work, the said John Owen hath been allowed an order on the Treasurer for five Pounds toward the same & Providing Materials.*

JOHN OWEN.

Copy of Bond of John Owen (High Sheriff) to Richards Jones, Samuel Lightfoot and John Parry, Jurn. Gentm. Commissioners of County of Chester."

The furniture indicated on the architect's drawings (pages 528 and 529), shows the use to which the building was put. They are the original furnishings as shown by an old document.

Copy of the furnishings ordered by the Chester County Commissioners for the new Court House in 1725.

"By a minute entered of Record in the Comrs. Books bearing Date ye 2 *Day of October Anno Dom* 1725 *it appears that the then Comrs agreed with John Owen to make a Large Oval Table in the Court House room above Stairs of the Dimensions of Seven by Eight Foot and another Table in the Grand Jury room of the Dimension of* 6 *by* 5 *feet and a Square Table in the Petty Jury Room of* 4 *foot long and* 2 *benches of Length of* 6 *feet each and one Bench of* 4 *foot long in the Same Room, and Necessary Conveniences in the office for laying and keeping the Records in, and Thomas Giffing is ordered to make two pr. of Tongs and fire Shovels for the two rooms with Irons to Lean them again as also Dogs and fenders for the Sd Rooms and Saml Hollingsworth procure* 4 *Dozn of Chairs* 4 *of which to be Arm Chairs."*

ARC WELDED STRUCTURAL STEEL

By

John Brackett

Consulting Engineer

ARC WELDING, APPARENTLY, has developed to a point where it may very reasonably command the attention of the architectural profession. If welding offered merely an alternative method of forming joints in steel structures, it would be of little general importance. Riveted joints are entirely satisfactory, and connection details would seem to be of interest to shop men and engineers rather than to architects.

Such is far from being the case. Arc welding creates possibilities so far reaching that they modify our entire conception of the relationship between loads and stresses in steel structures. Under the influence of the electric arc, single span girders become continuous over many supports, carrying their loads with less steel than before, and distributing their reactions in an entirely different manner among the members which must carry them. Beams once supported between columns become integral with their supports, rather than supported ends, and with a vastly different and a far more complex system of beam and column strains.

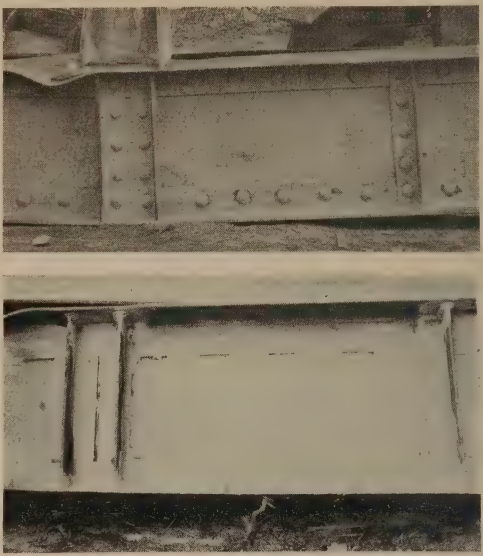
Compound sections may be welded up out of sheared plates, using no structural shapes whatever. As compared to riveting practice, tests of girders constructed in this manner have show truly remarkable gains in economy of material per unit of useful load.

The mechanics of arc welding are extremely simple. A source of current is connected directly to the steel structure, and on the other side, to a steel welding wire, operated by the workman. Touching the wire to the steel "pulls" an arc, melting the edges to be joined, and causing them to flow together into one piece of solid steel. In the process the welding wire fuses into the joint, building it up in cross section until its resistance considerably exceeds that of the original steel area. Low voltages are used, eliminating personal risk. The welding wire, with its convenient holder, weighs about two pounds—far less than a riveting hammer. The operation ceases when the wire is withdrawn from the steel. While in contact, the arc may be drawn slowly around any shaped joint, leaving solid welded steel in its path.

A SCHOOL FOR WELDERS
Workman executing an overhead weld in the Westinghouse School.

In common with all industrial arts, considerable skill is required. Flat seams, as on a floor or bench are the easiest to weld. Vertical seams, as in welding a beam web to a column, and overhead welds, as in welding bottom flanges of girders, are much more difficult. All of these operations, however, seem to be well within the reasonable expectations of good workmanship. Similar conditions form the basis of the thoroughly practicable lead burning art, where sheets and sections must be fused together from every conceivable point of approach—the soft, fusible lead offering a far more elusive problem, especially overhead, than is offered by steel. Riveting, too, is far from being an unskilled profession. It calls for strength, skill, and teamwork to a far higher degree than is generally appreciated.

Poor work may occur in welding as well as in field riveting, but it is perhaps even easier to discover by inspection. This statement is perhaps worthy of further examination. One is apt to visualize welding as of a shaft, or a forging, where a mass of metal is joined, the bulk of it far beneath the surface. However trustworthy such operations usually are, their surface indications are of little value. Conditions in a steel structure are very different. All of the sections are relatively light—often thinner than the welding wire. It is customary to make the external bead of the weld as heavy as the webs of some girders. The visible portions of the weld form an extremely high percentage of the total joint. It is scarcely possible for defects to exist without showing—in fact, the surface manifestations of even slightly defective welding are far more glaringly apparent than are those of poor riveting, where the head may be perfect, but the hole far from being filled. It may fairly be said that poor welding and poor riveting are at least equally easy of detection and repair. In either case the prevailing factors of safety are ample provision against ordinary deviations from perfect work.



GIRDERS OF SIMILAR DESIGN
The upper girder is riveted. The lower one is of riveted *design* and welded construction.

The American Bridge Company are erecting a five-story steel building at the Sharon Works of the Westinghouse Electric and Manufacturing Company. Welded construction is used throughout. Exhaustive tests of welded construction preceded the design, and the test members were of full size, built and tested under actual service conditions. Welds, for example, between girder webs and columns, were made vertically, as would be the case in practice. Overhead welds were made at points where they would normally occur. Built up beams and the like were welded flat, as would be the case in shop practice. Twenty-two specimens were tested to destruction.

Six of these tests were of cantilever beams protruding from a column. Tests of this kind are simple tests of the joint itself. In every case but one, complete failure of beam or column was effected without injury to the welded joint. In the one case the weld, noted to be inferior, failed, but only after a complete rupture had occurred of the top flange of the girder.

Insofar as a set of tests may be regarded as proof of anything, these tests indicate that welded joints can be made to develop the full strength of structural members; that beams and girders can be connected to columns so as to produce absolute fixation; that lines of beams or girders can be connected so as to produce complete continuity across supports, whether the supports be girders or columns.

These conclusions are extremely important to the structural steel designer. The first conclusion is not so important. It has always been more or less assumed that riveted connections can develop the full strength of members. Proof that welding will do so might be of importance in the design of structures for earthquake regions, where unusual service may very conceivably occur. Absolute fixation of beams to columns, however, and entire continuity of lines of girders, are elements which, if granted, will save money in the design of almost any structure, anywhere.

Two tests were made of beams welded

between supporting columns, and one test of a similar beam exceptionally well riveted between supporting columns. The comparative breaking points were 73,500 lbs. and 58,700 lbs. This test would apparently justify the assumption of a very high degree of fixation of beams welded between columns. When this is allowable, immediate economies result in the steel design.

Eight tests were run on welded rods, continuous welded girders, welded truss members and the like, all tending to support the above conclusions.

Four tests were run on built-up girders of similar dimensions — very striking tests, which seem to suggest tremendous possibilities. The girders were built in three types, one riveted, one of riveted design (plates and angles) but of welded instead of riveted construction, and two of special welded design. The riveted girder failed at 68,900 lbs. The welded girder of riveted type failed at 77,200 lbs. The welded girders of especial welded design failed at 110,350 lbs.

These figures are as striking as the underlying facts are simple. The special welded design, which failed at 110,350 lbs. was simply three sheared plates, welded into an I form, with flat bars on edge for web stiffeners.

All specimens were loaded by means of rocker blocks 5-in. wide 8″ long, 10″ high finished on two faces to a radius of approximately 2-ft. Plates 1½-in. thick, 5-in. wide by 8-in. long were placed between the rocker blocks and the specimen so as to distribute the load through the rocker block over an area 5-in. wide across the specimen. Cantilever specimens, of course, were loaded at a point approximately 3-in. from the end, whereas simple beam specimens were supported by means of the rocker blocks on various spans, the load being applied at the center of the specimen through a similar 5-in. wide by 1½-in. thick block.

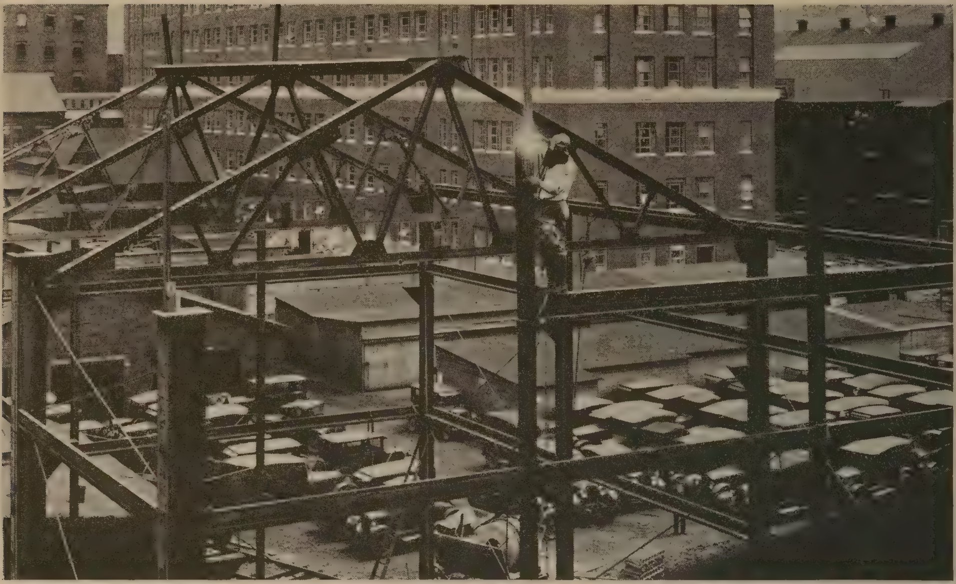
The amount of weld metal used to make the various joints is unquestionably in excess of that actually required to produce joints of 100% strength, but this was intentionally incorporated in the design of the test specimens so that we could prove beyond the shadow of a doubt that structural members can be joined by arc welding, making joints which will not fail even up to rupturing loads on the members so joined.

COMPLETELY WELDED GIRDER
This girder is fully welded and is of special welded design.

In carrying out further tests in the future, determinations will be made as to the minimum amount of weld metal which can be used for such joints and still retain the requisite strength at the joints.

It is perfectly apparent, with the development of welding, that stock sections of this kind can be put on the market and their advantages and economies realized by the mere process of specifying them —from hand-book data. Such economies are already available to an extent in the various pressed steel purlin sections which the market affords. With welding perfected and recognized, similar economies are to be expected in heavy steel.

Proponents of welding realize, no doubt, better than any one else, that there is much work still to be done. Welding must be admitted under building codes. Safe possibilities must be fully established, and the facts put in hand-book form, as easy to use as a riveting table. Welded details must be thoroughly standardized, and the data made generally available. Only then can the art be regarded as a practicable thing, ready for the non-specializing engineer and architect to use. All of these things have been done in structural steel and in reinforced concrete practice. There is no apparent reason why they cannot be accomplished



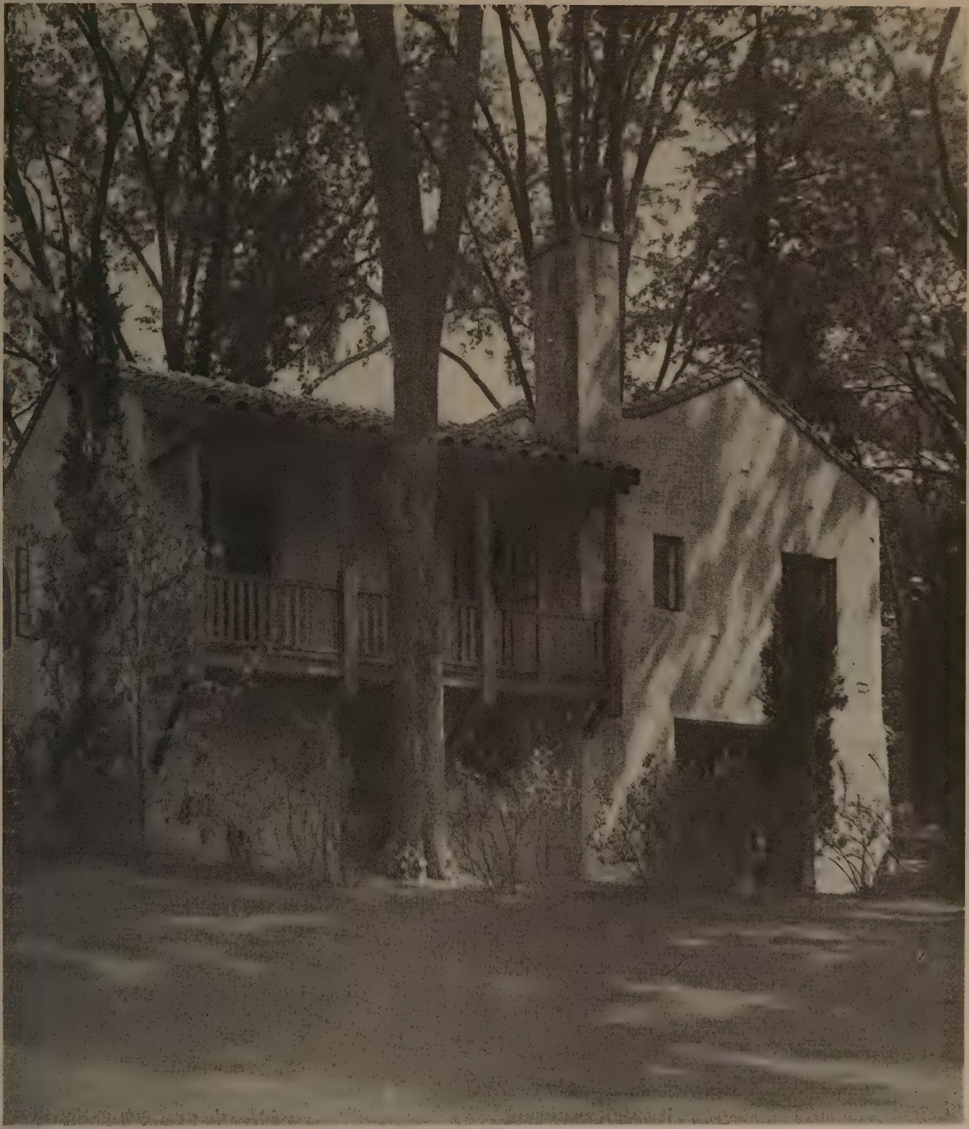
COMPLETELY ARC WELDED BUILDING ERECTED BY THE WESTINGHOUSE ELECTRIC AND MANUFACTURING COMPANY

by welding engineers. Apparatus is becoming highly perfected. The Westinghouse Company has established a school for welders. It is generally recognized that welding must be "sold" by careful, thorough presentation of the facts. All of this is extremely reassuring.

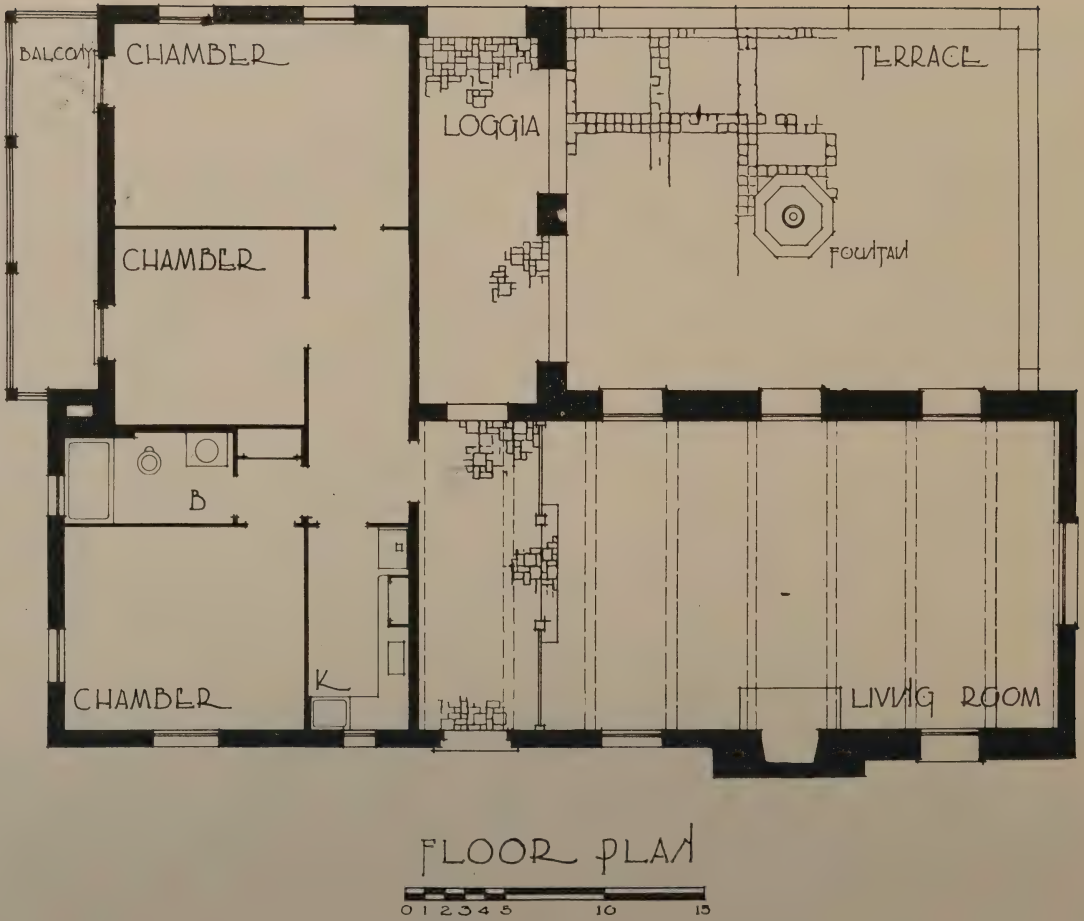
Meanwhile, it is possible that a new and important element of design is taking form. Its basic possibilities are great, and even its incidental advantages are considerable. Many a designer on alteration work would welcome the electric arc when steel appears in unexpected places. When changes and extensions must be made from old records, the results cannot always be forseen. If the man on the job can cut and shape steel even a very little, how much trouble and annoyance may be avoided. And, truly, the roar of the riveter is among the things that never will be missed.

PORTFOLIO

CVRRENT · ARCHITECTVRE



REAL ESTATE OFFICE, FOX MEADOWS ESTATE, HARTSDALE, N. Y.
Andrew J. Thomas, Architect



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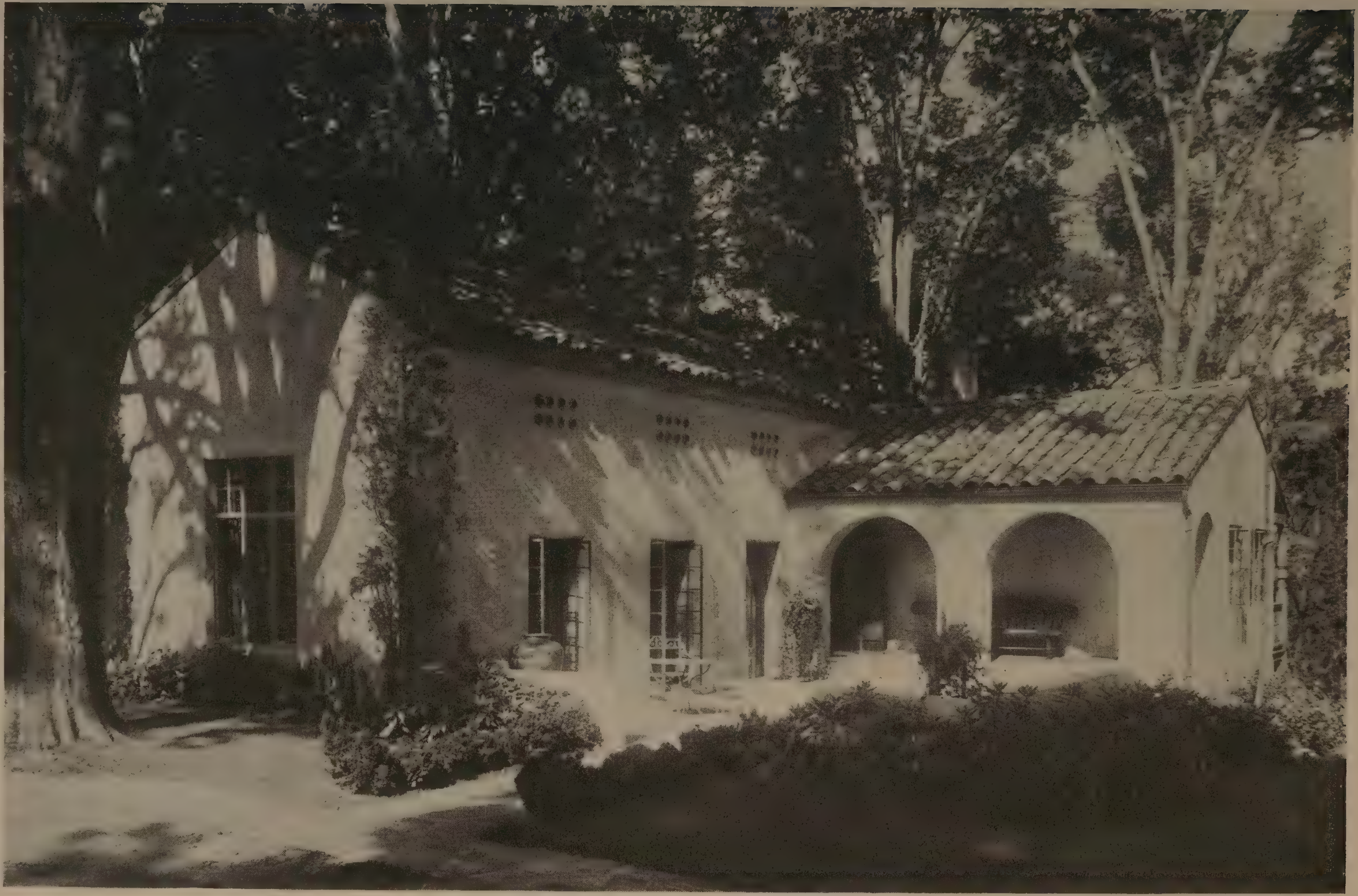

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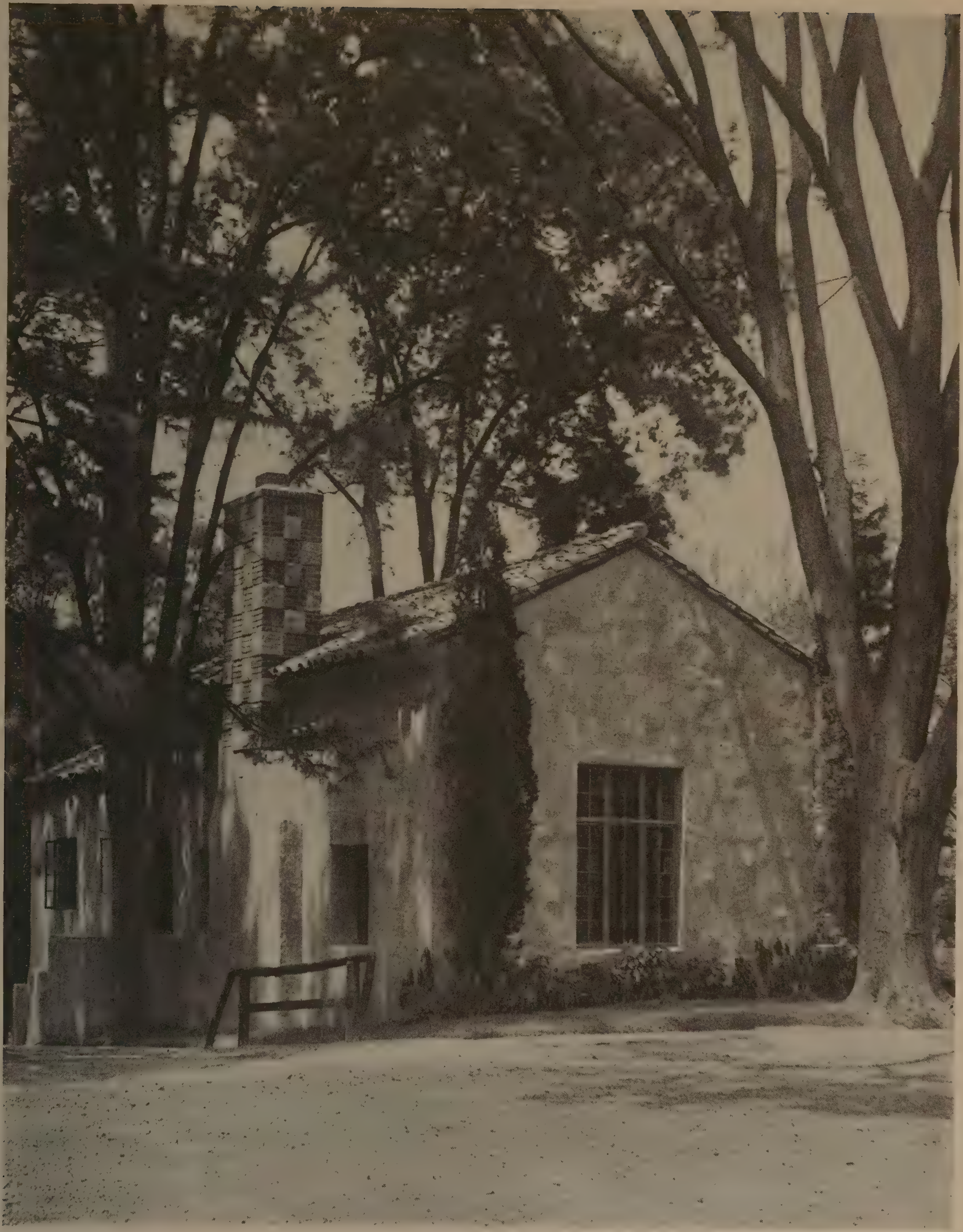

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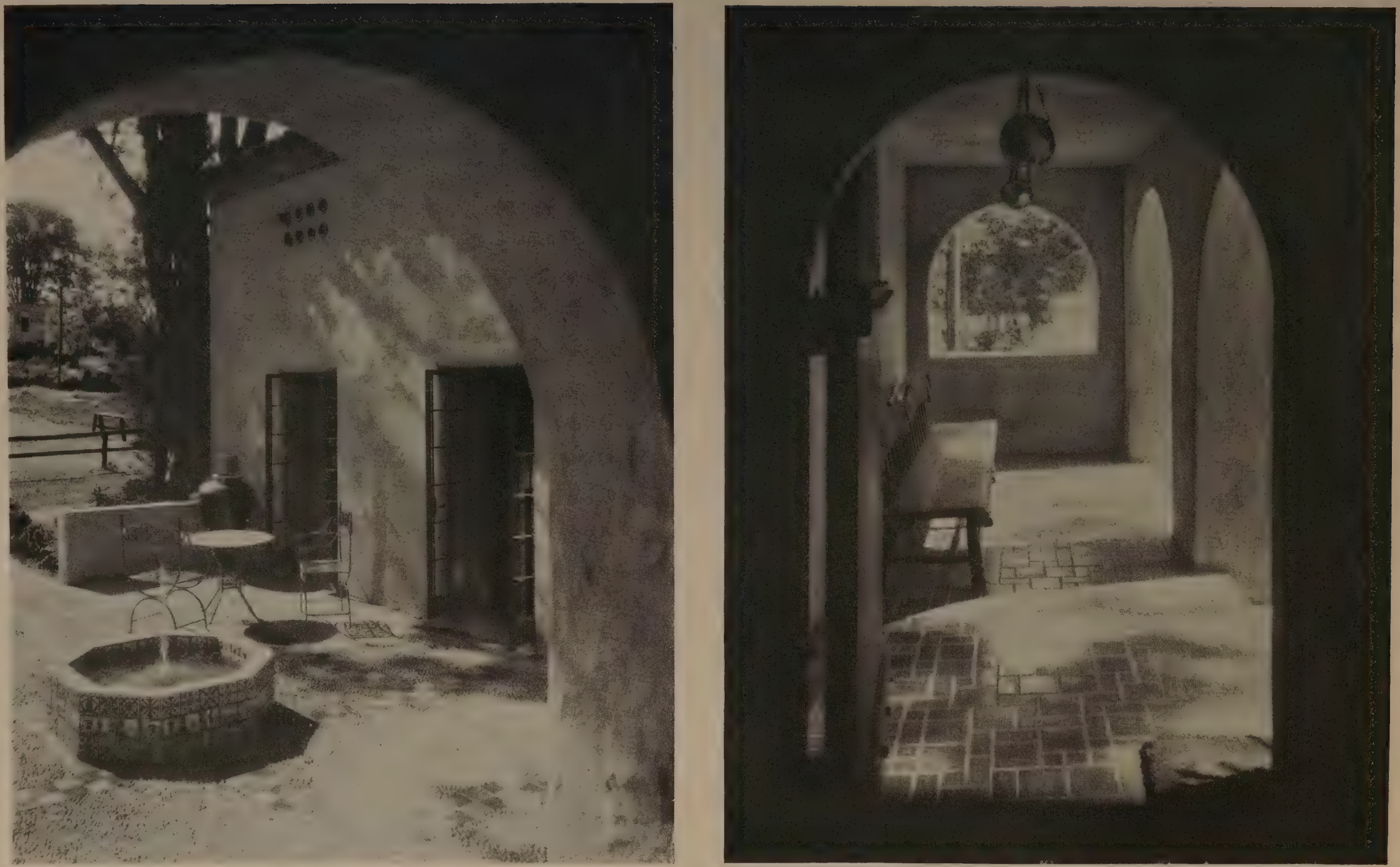

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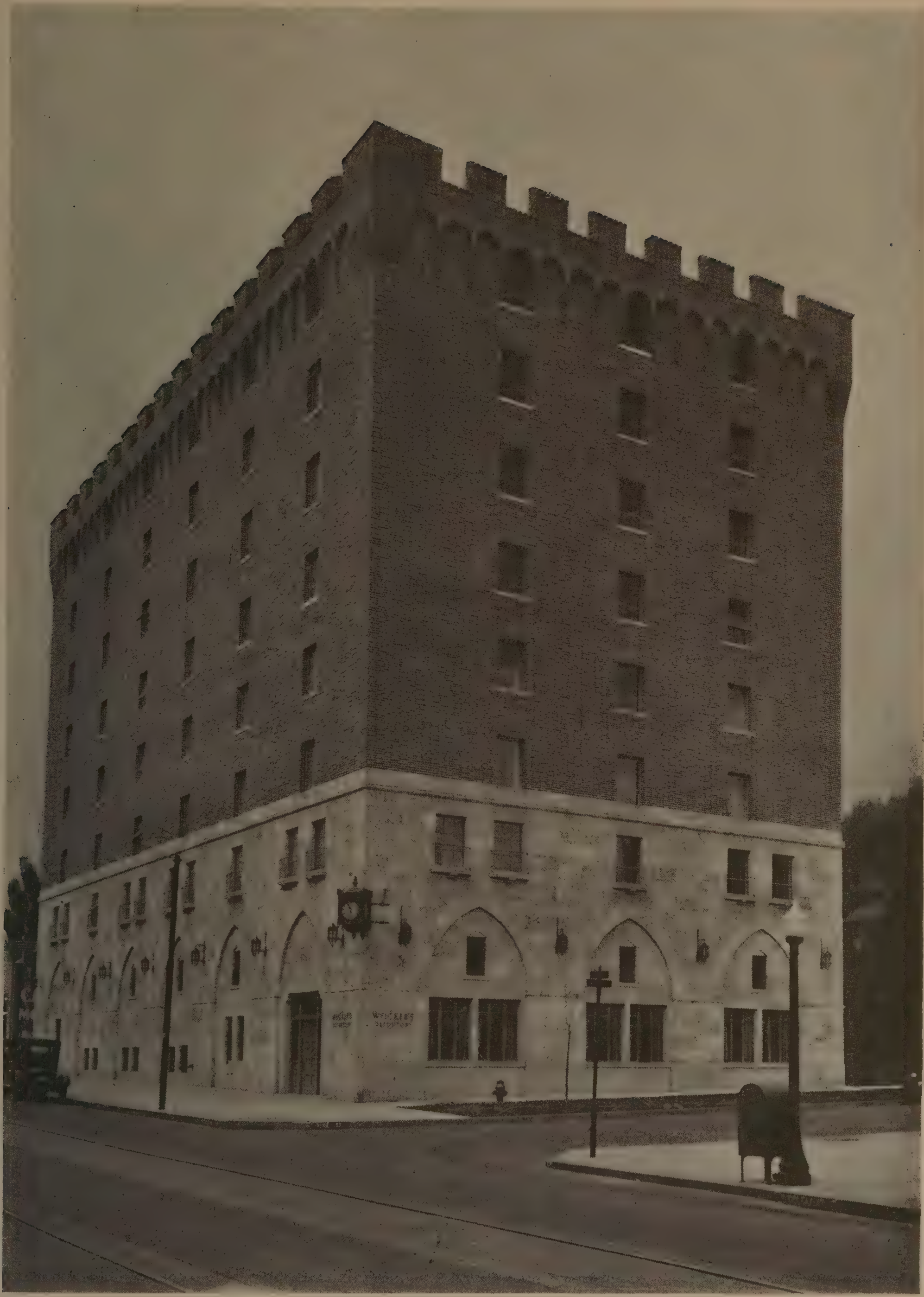
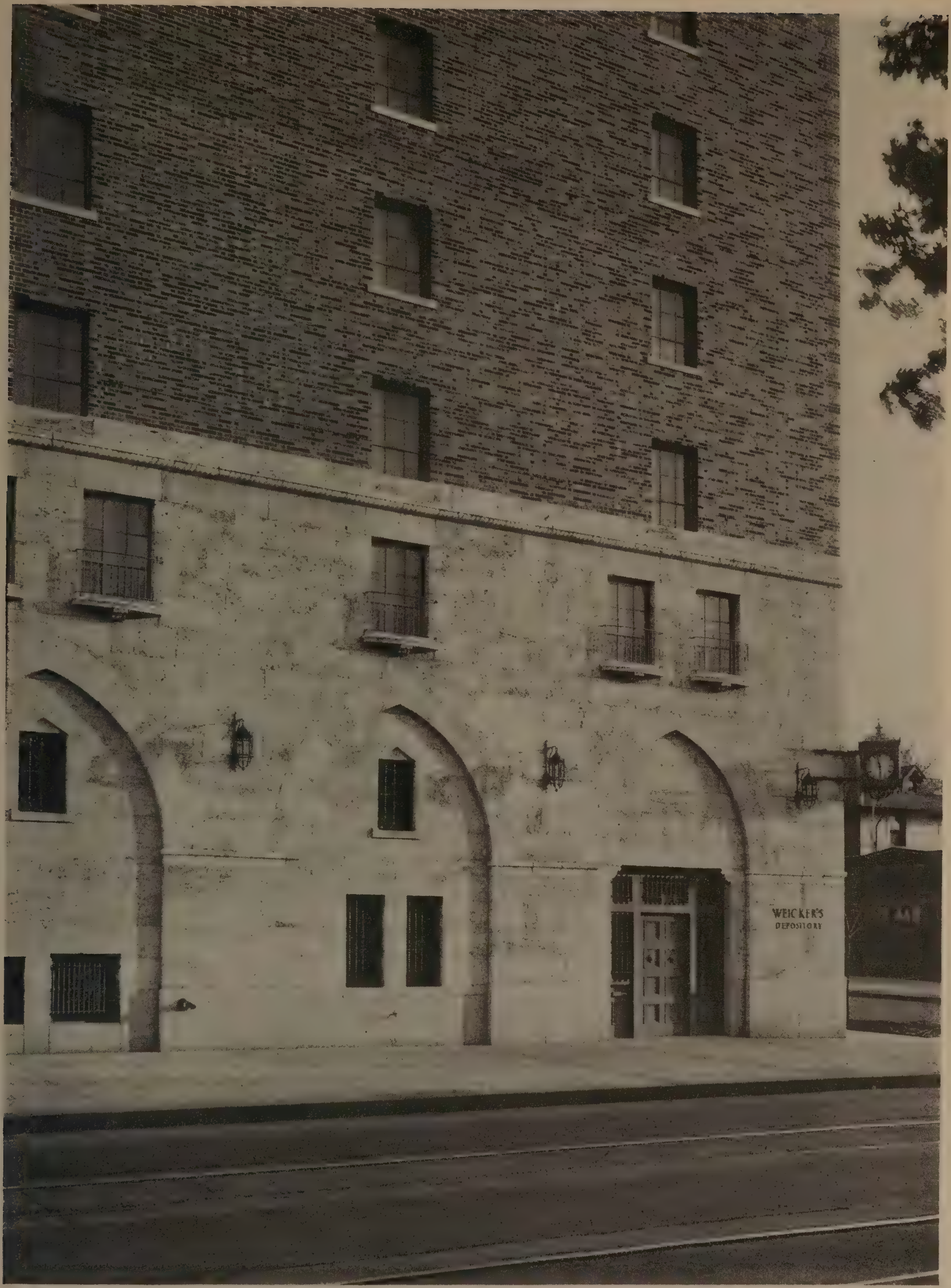


DEPOSITORY OF THE WEICKER TRANSFER AND STORAGE CO., DENVER, COLORADO
William E. & Arthur A. Fisher, Architects



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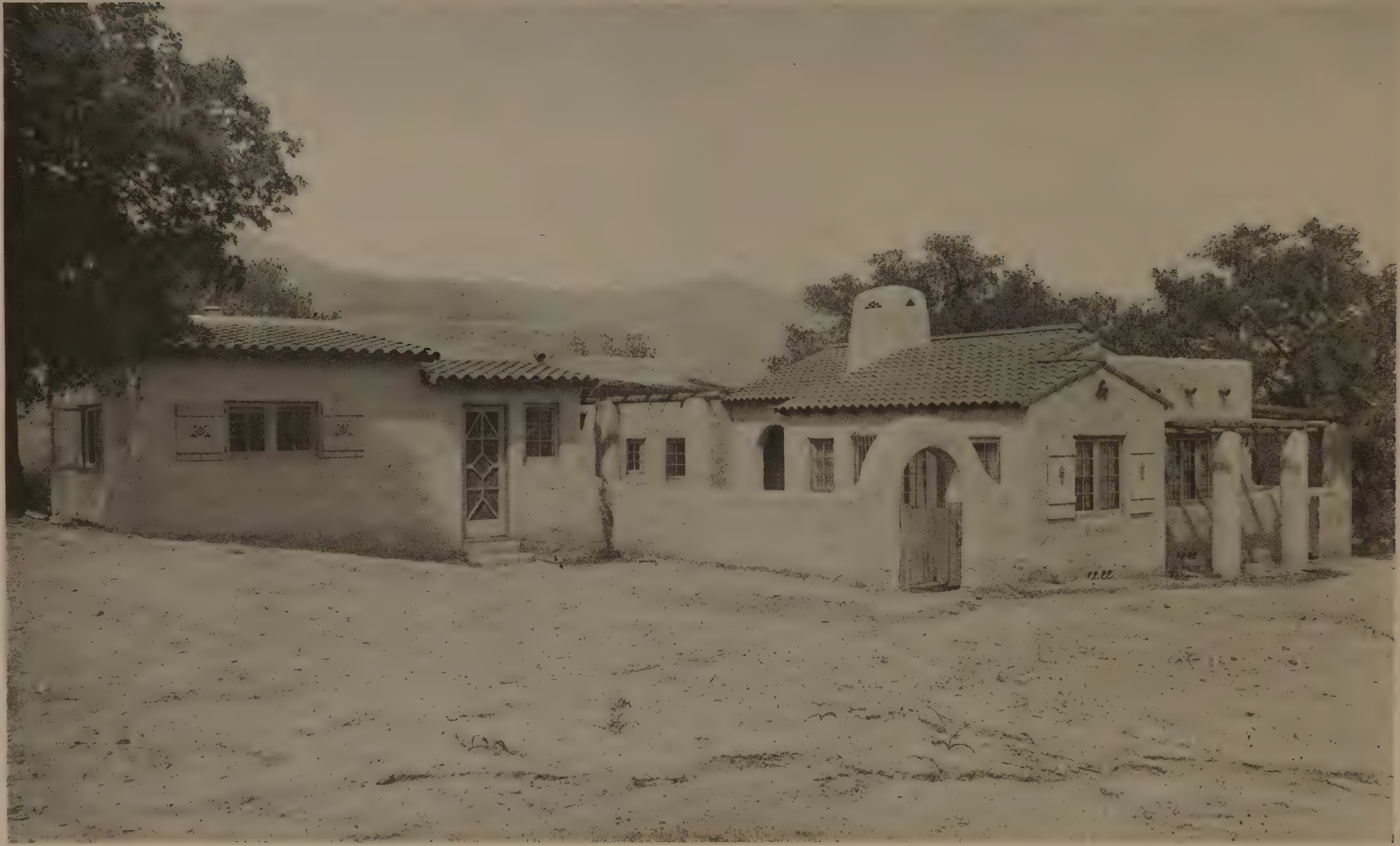
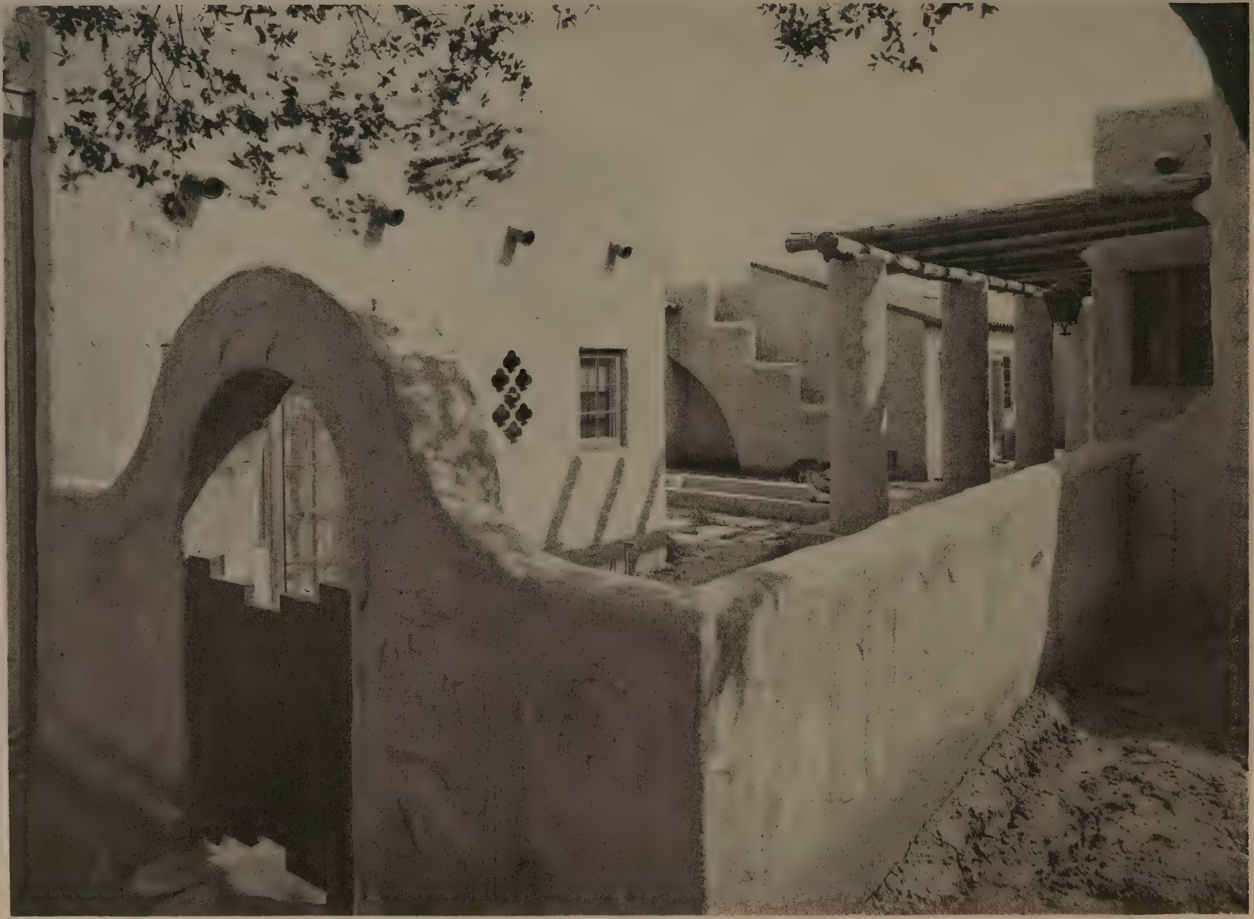


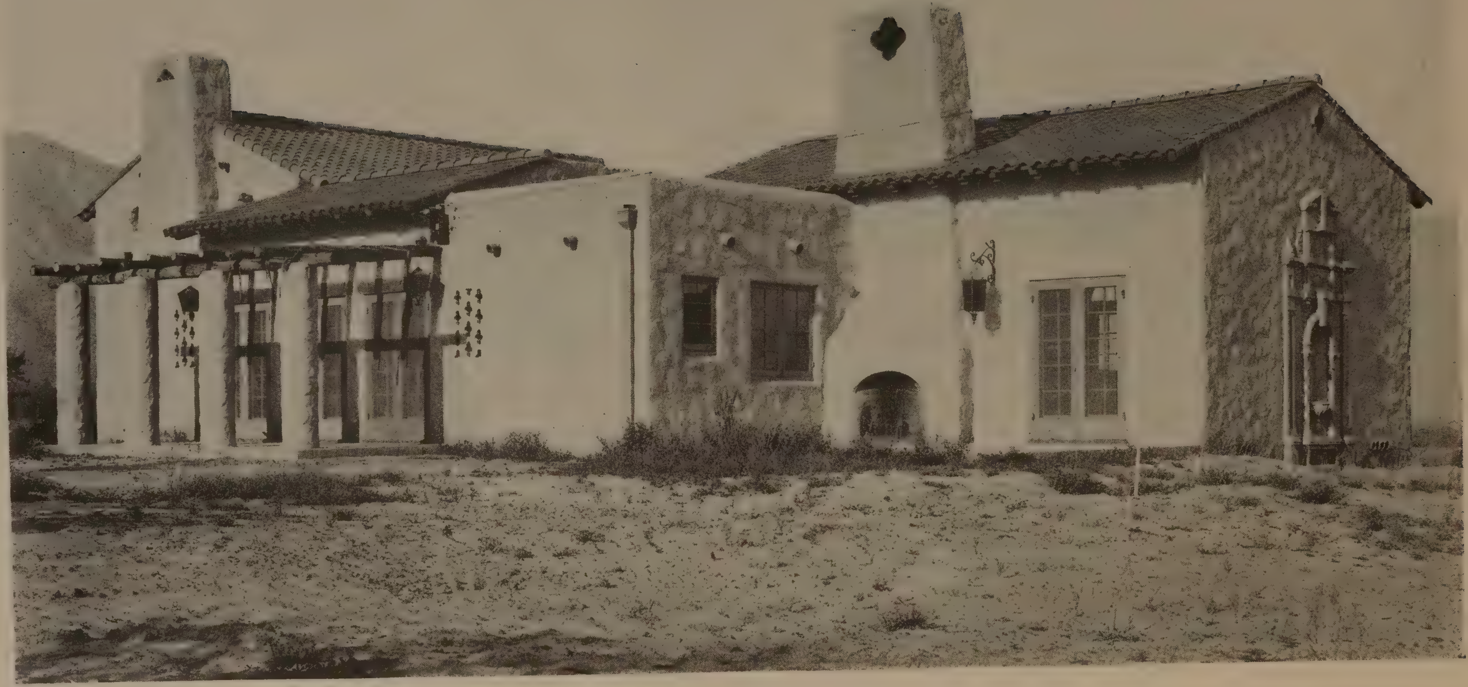
South View of the President's House
THE KROTONA INSTITUTE OF THEOSOPHY, OJAI VALLEY, CALIFORNIA
Robert B. Stacy-Judd, Architect



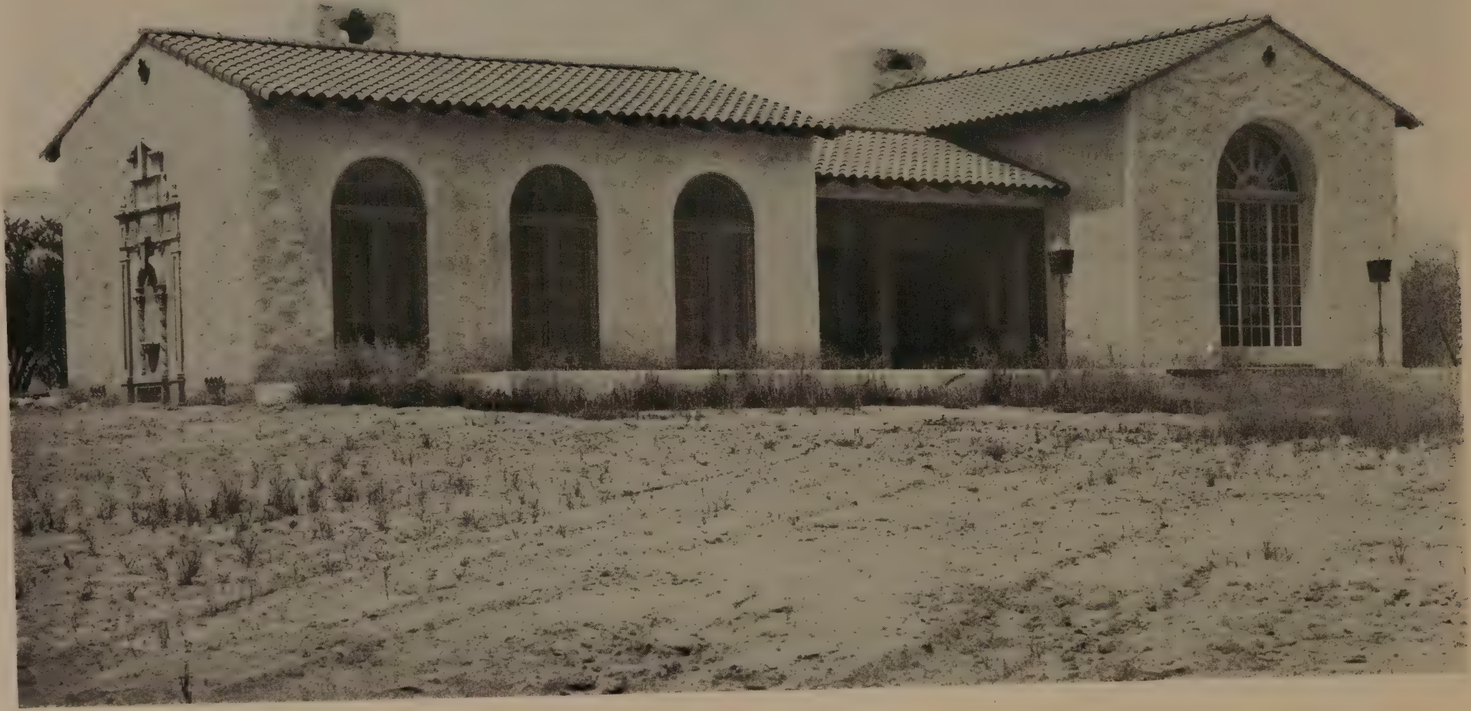
Detail, Patio of the President's House

THE KROTONA INSTITUTE OF THEOSOPHY, OJAI VALLEY, CALIFORNIA

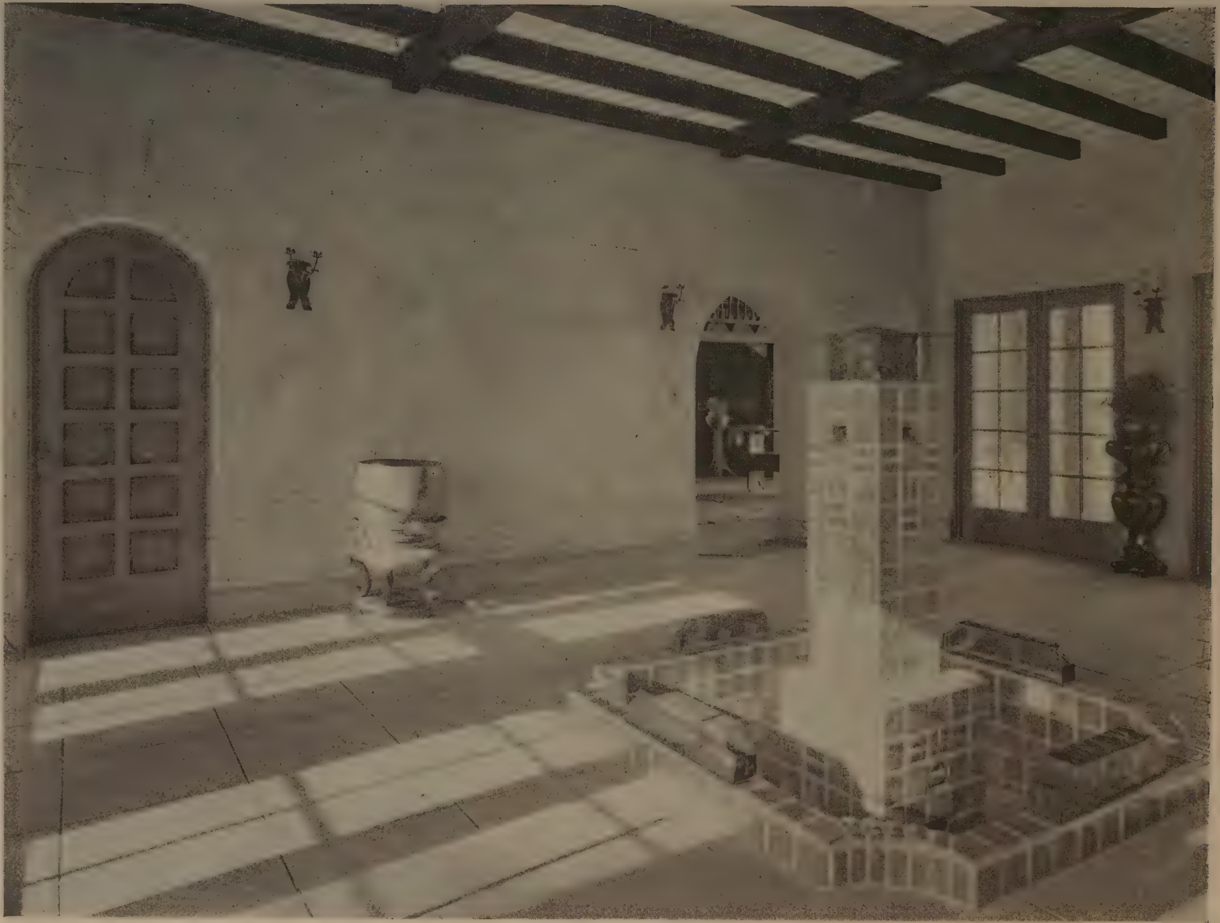
Robert B. Stacy-Judd, Architect



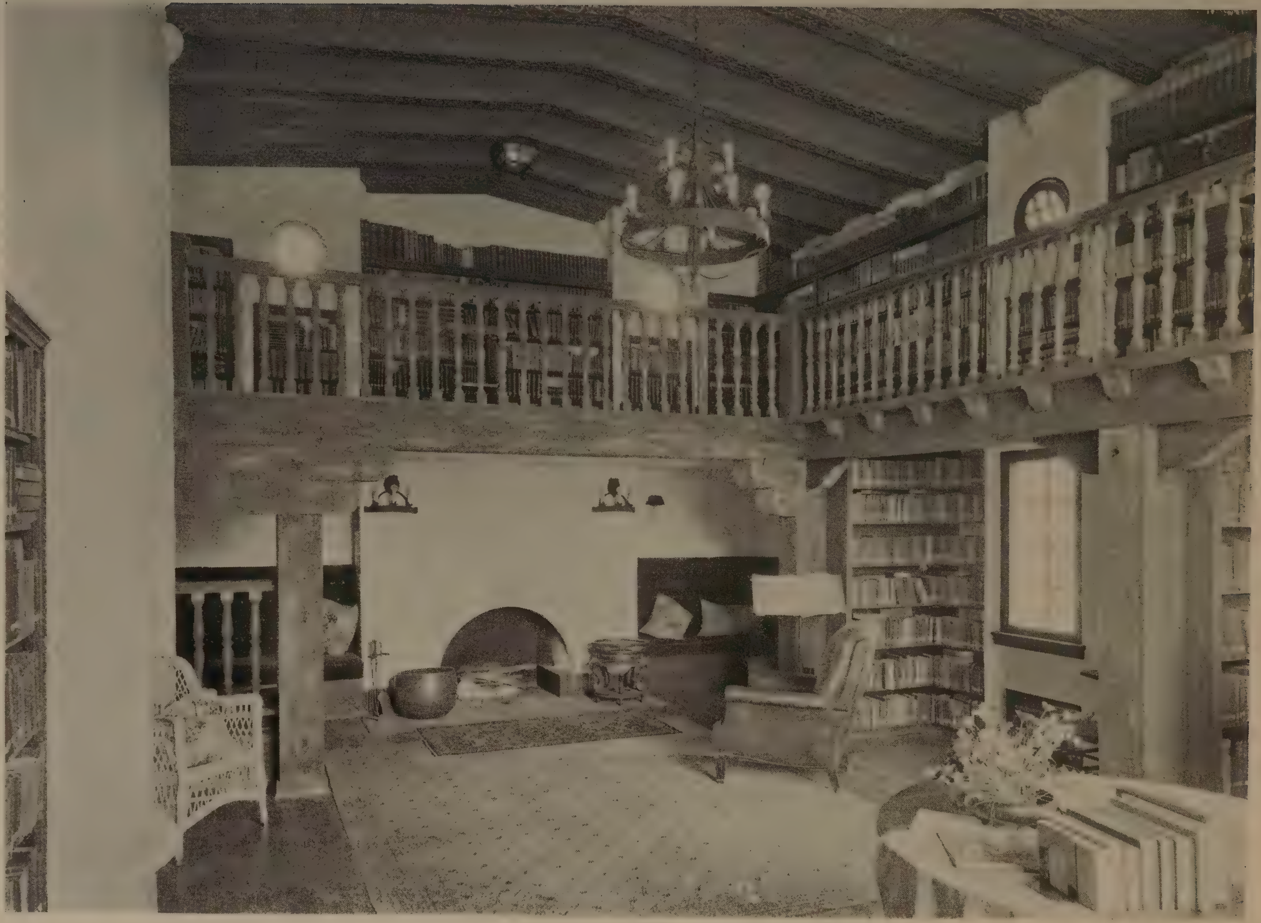
Southwest View of Library Building
THE KROTONA INSTITUTE OF THEOSOPHY, OJAI VALLEY, CALIFORNIA
Robert B. Stacy-Judd, Architect



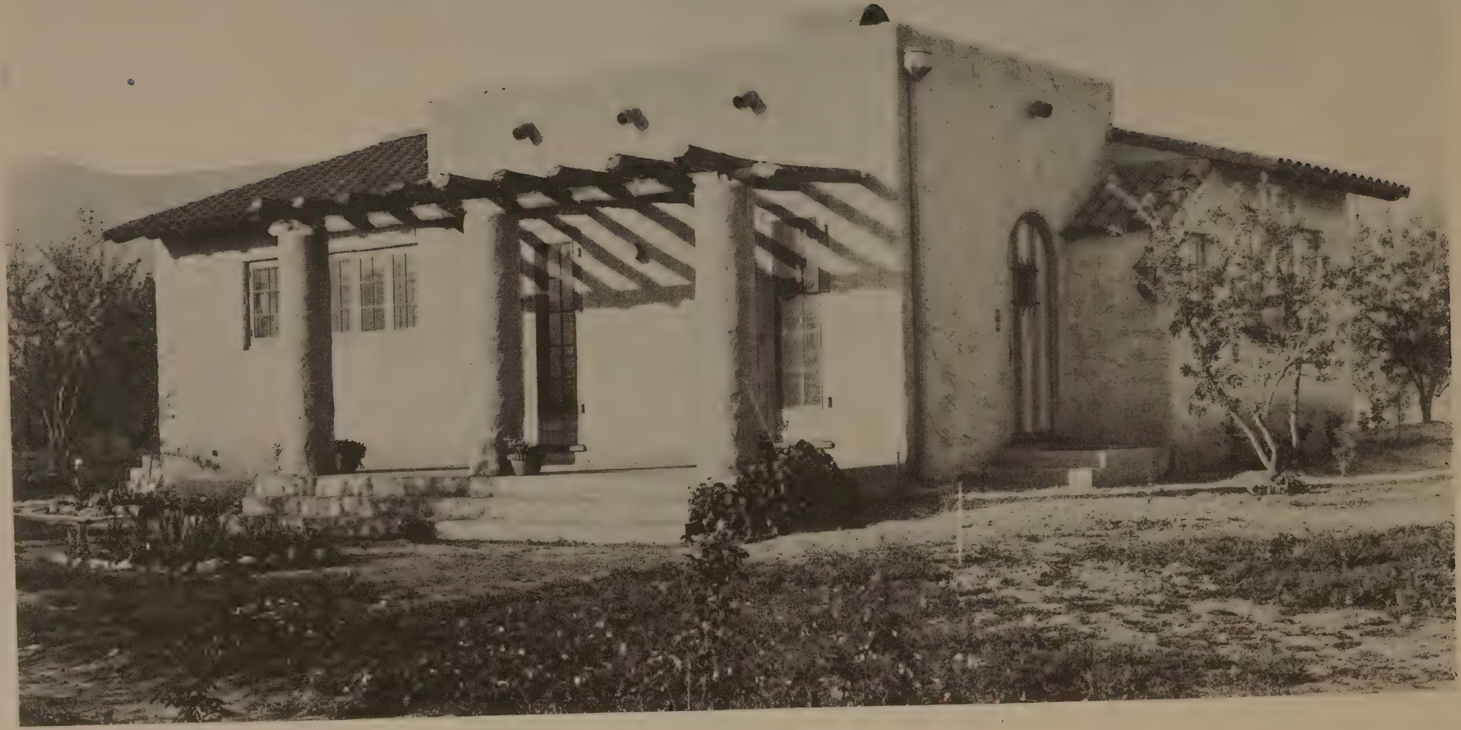
Southeast View of Library Building
THE KROTONA INSTITUTE OF THEOSOPHY, OJAI VALLEY, CALIFORNIA
Robert B. Stacy-Judd, Architect



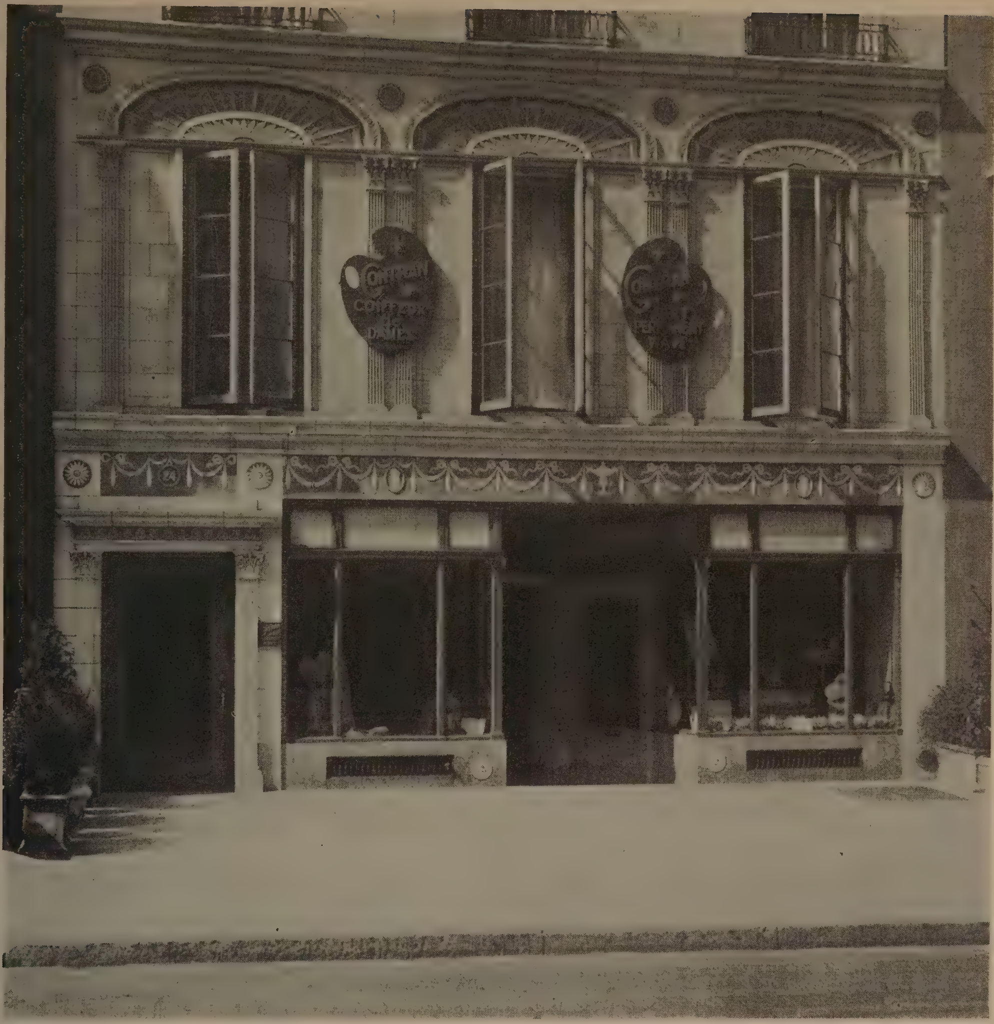
The Lobby, Library Building
THE KROTONA INSTITUTE OF THEOSOPHY, OJAI VALLEY, CALIFORNIA
Robert B. Stacy-Judd, Architect



The Library, Library Building
THE KROTONA INSTITUTE OF THEOSOPHY, OJAI VALLEY, CALIFORNIA
Robert B. Stacy-Judd, Architect

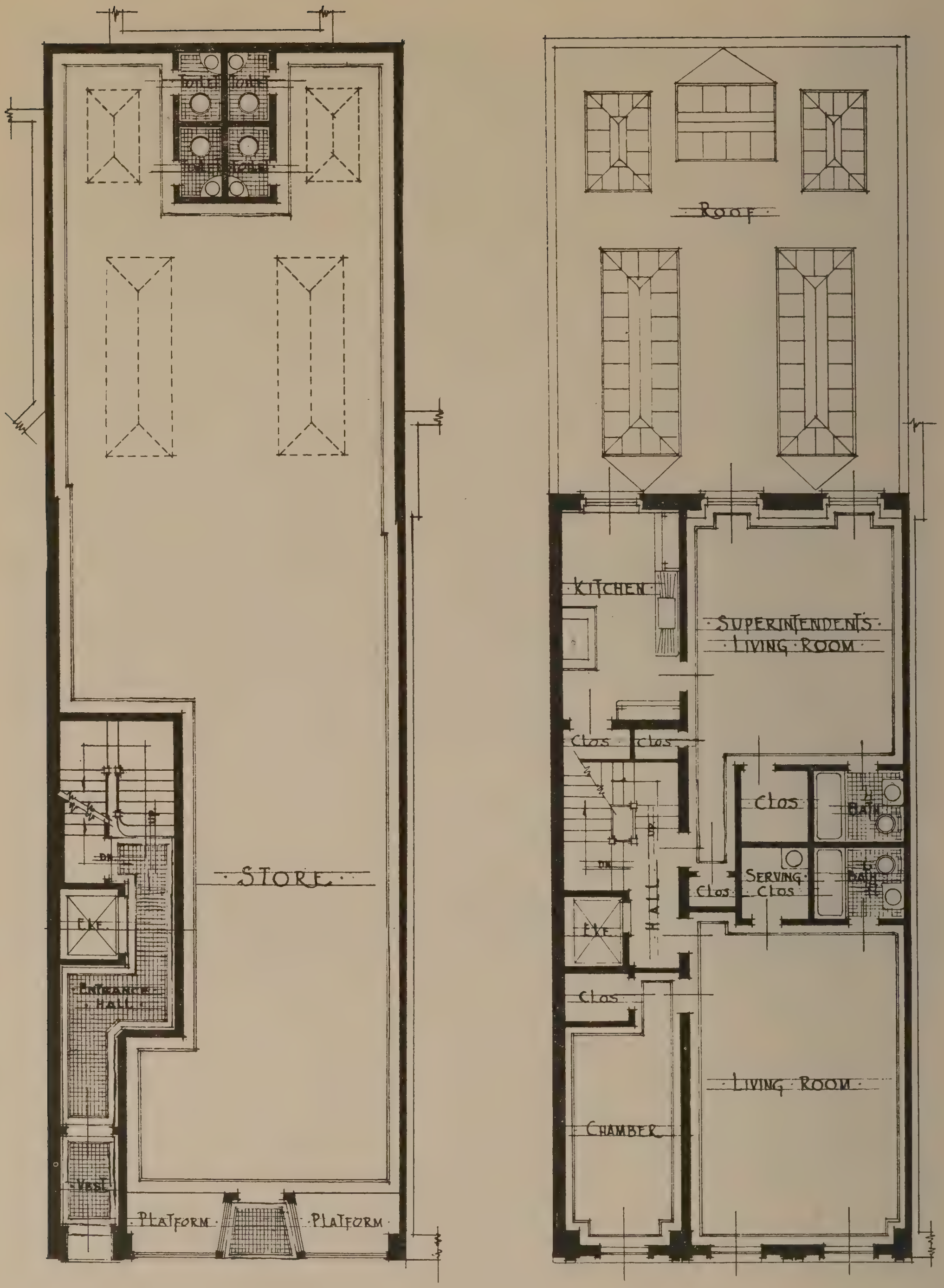


One of the Cottages for Students
KROTONA INSTITUTE OF THEOSOPHY, OJAI VALLEY, CALIFORNIA
Robert B. Stacy-Judd, Architect



Photo, Amemiya

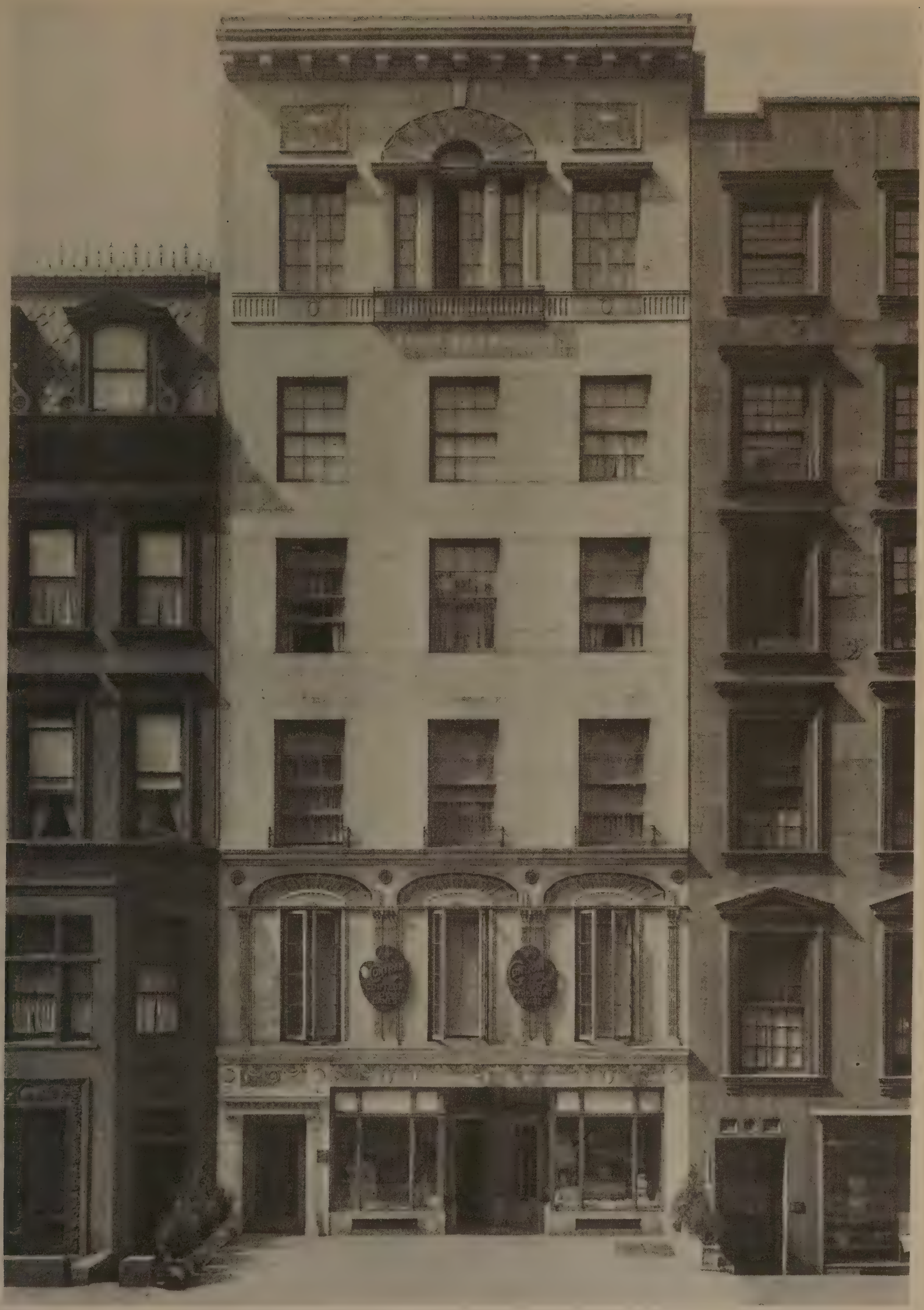
THE AEON REALTY BUILDING, NEW YORK CITY
Joseph C. Schaeffler, Architect



FIRST FLOOR PLAN

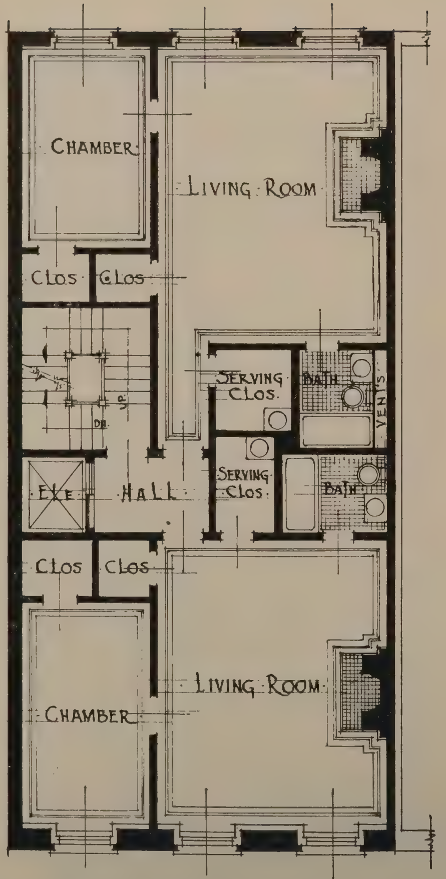
SECOND FLOOR PLAN

THE AEON REALTY BUILDING, NEW YORK CITY
Joseph C. Schaeffler, Architect

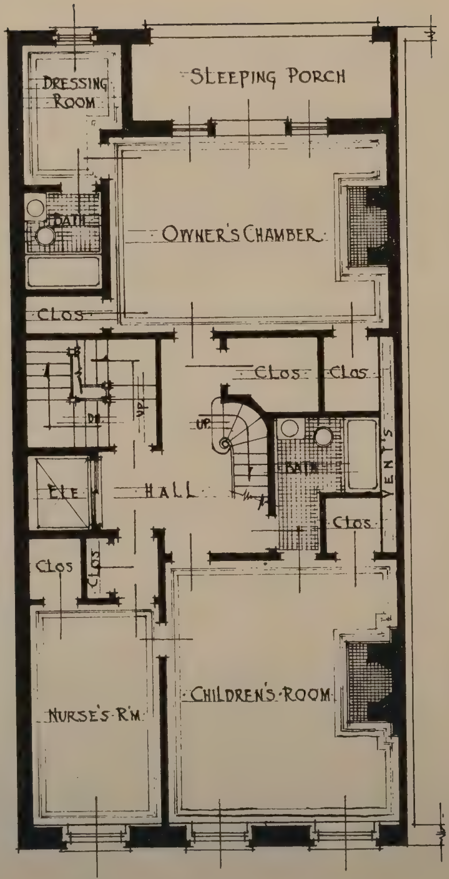


Photo, Amemiya

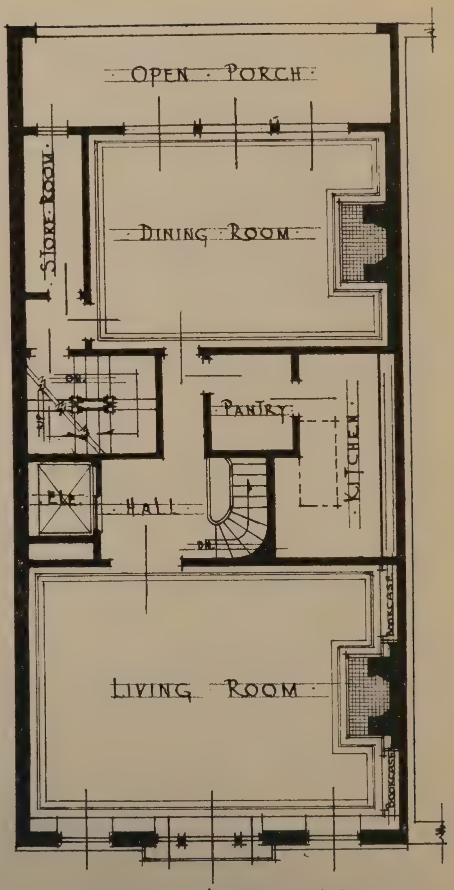
THE AEON REALTY BUILDING, NEW YORK CITY
Joseph C. Schaeffler, Architect



THIRD & FOURTH FLOOR PLAN

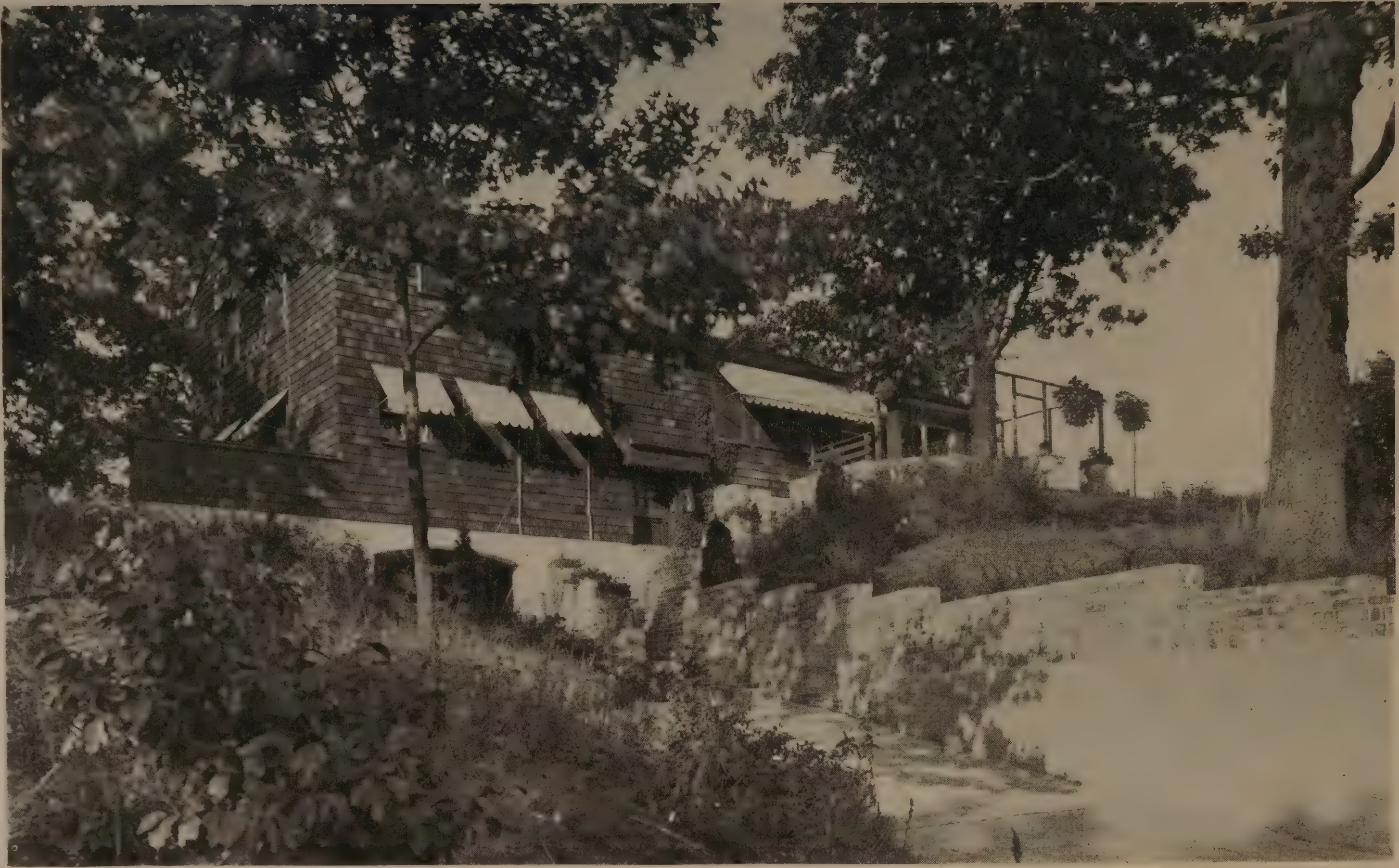


FIFTH FLOOR PLAN

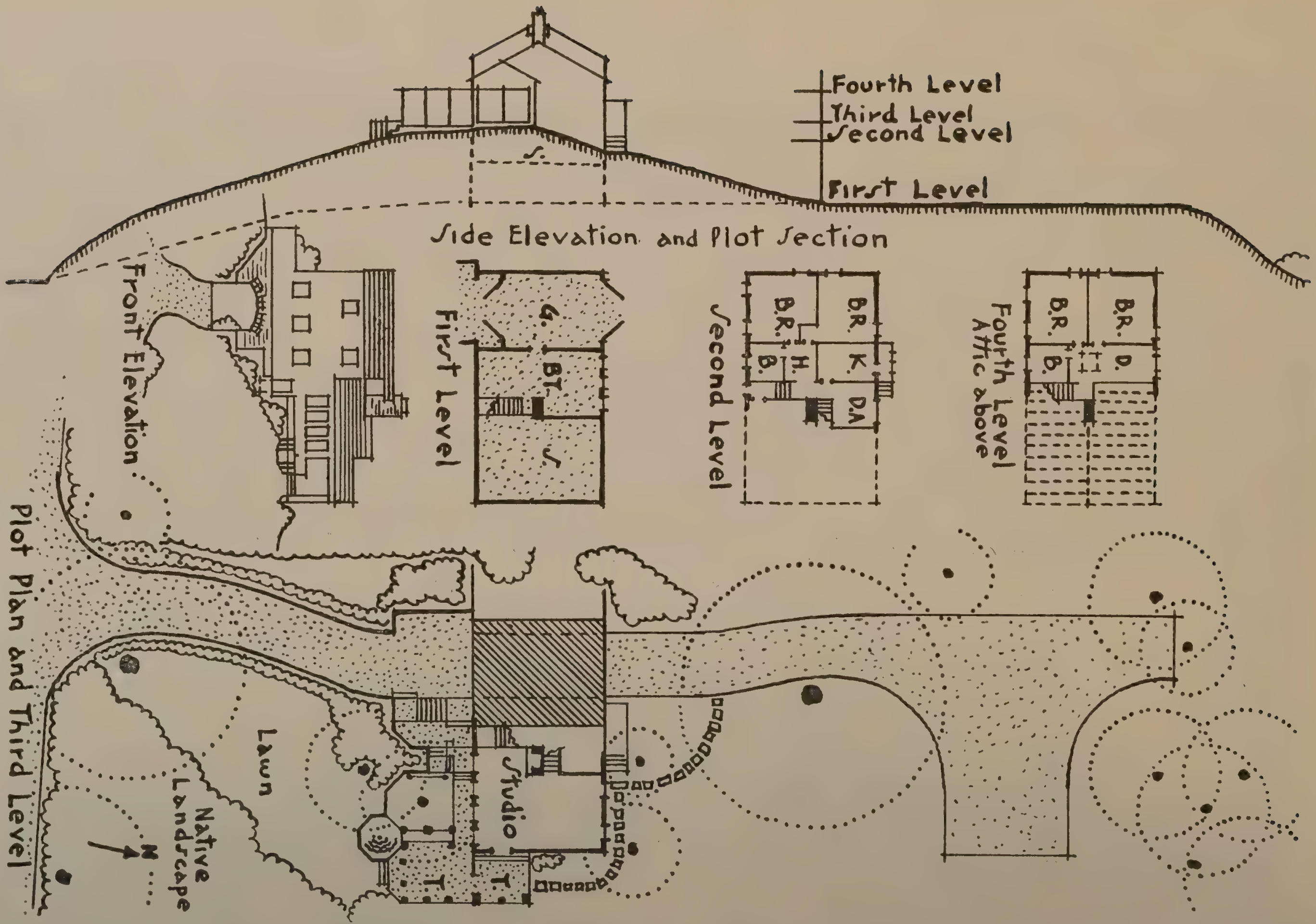


SIXTH FLOOR PLAN

THE AEON REALTY BUILDING, NEW YORK CITY
Joseph C. Schaeffler, Architect



THE STUDIO HOME OF JOHN LLOYD WRIGHT, ESQ., AT LONG BEACH, MICHIGAN CITY, INDIANA
John Lloyd Wright, Architect



STUDIO HOME OF JOHN LLOYD WRIGHT, ESQ., LONG BEACH, MICHIGAN CITY, INDIANA
John Lloyd Wright, Architect

SCHOOLS in LONDON

by

B. S. Townroe, M.A.

ONE OF THE urgent problems in post-war England is the provision of new schools. Many of the older schools, especially those belonging to religious denominations, are already condemned as unsuitable for modern needs, and even as insanitary. There have also been new districts growing up, especially around London and the great cities, the younger inhabitants of which need education. But the cost of building has more than doubled since 1914, and the burden upon the National Exchequer of Great Britain increased by war debts and pensions is so staggering that the amount now voted for schools is reduced to a minimum.

For these reasons architects and engineers have been giving a good deal of attention recently in England to devising more economical ways of designing and building elementary and secondary schools. A Committee appointed by Lord Eustace Percy, the President of the Board of Education, is at present at work investigating the possibilities of concrete, wood, steel and even of cast iron as possible materials, in order to reduce costs.

Accompanying this article are floor plans of an elementary school and of a secondary school recently constructed in London. The prints reproduced on Pages 572-574 show details of the latest type elementary school completed early this year at Downham, one of the London County Council's new housing estates south of the Thames, and the façade of the new Tooting Secondary School.

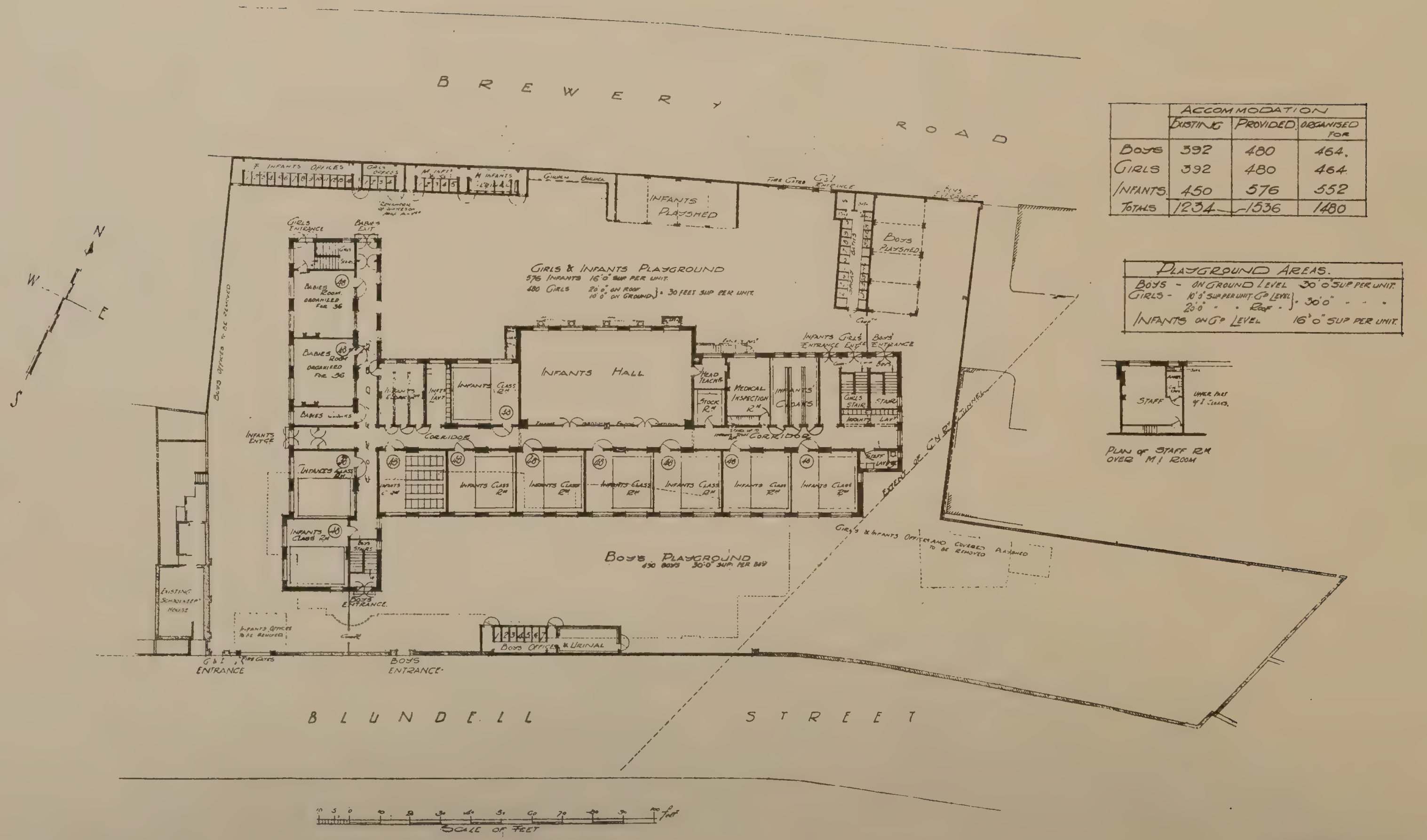
The principle now followed is that children should enjoy as much fresh air as possible in their work. Accordingly many of the windows extend right to the ground so that they can be opened in the summer time, and the children study practically in the open air. (See Page 572.)

It is also thought advisable not to build too strongly or too permanently, for educational policies change as the years go by. For example, many of the larger schools in London, built before the War, were constructed for large classes, whereas today educationalists believe in small classes. Accordingly the general arrangements of the design of the schools in London are made flexible so as to meet any requirements which might be anticipated in the future.

Mr. Topham Forrest, chief architect of the London County Council, who made a study of American schools in 1924, confesses that apart from the question of organization, the better type of elementary schools in America appears to be superior to London elementary schools. This is especially the case, as far as general accommodation and equipment are concerned. American schools allow fourteen feet clear from floor to ceiling, whereas London classrooms have twelve feet. In America, kindergarten rooms are provided for children up to five years of age, and in London also babies' rooms may be found.

It will be seen from the illustration on Page 574 that the width of the corridors in London is less than that found in many American schools. For example, in a school at Detroit, described by Mr. Topham Forrest, the corridors are about 14 feet wide. Whereas in America the necessary offices and lavatories are generally inside the building, in the elementary schools of London they are placed outside, although in some cases they are approached by covered ways.

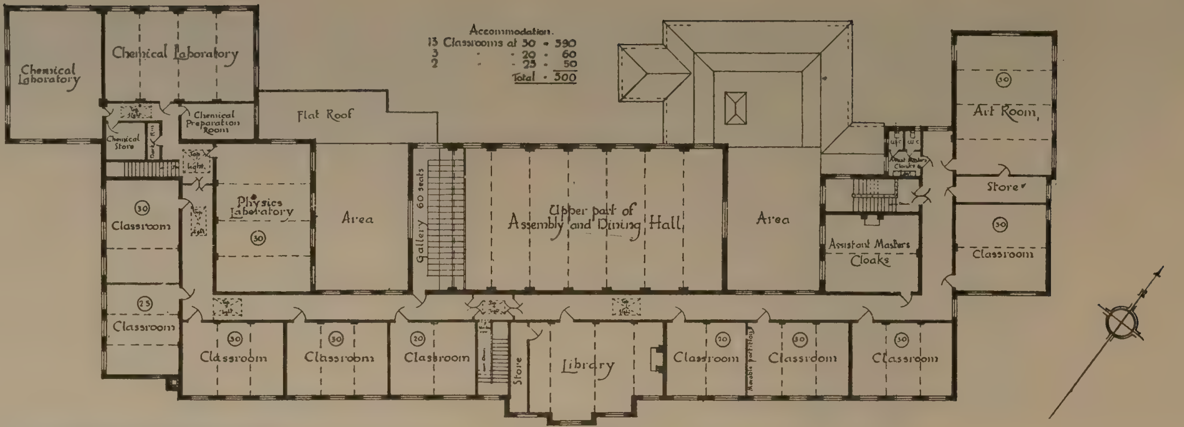
Gymnasia are provided in both elementary and high schools in America, 30 sq. ft. being allowed for each pupil, but in London they will not be found at all in elementary schools. Dining rooms are not provided in London. There are medical inspection rooms in all schools of the latest type.



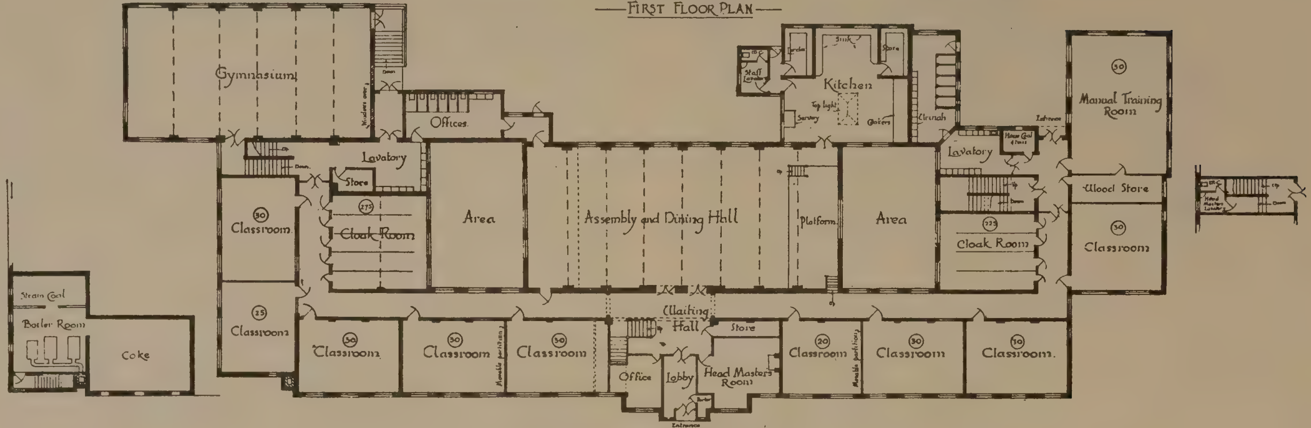
	ACCOMMODATION		
	EXISTING	PROVIDED	ORGANISED FOR
BOYS	392	480	464.
GIRLS	392	480	464
INFANTS.	450	576	552
TOTALS	1234	1536	1480

PLAYGROUND AREAS.
BOYS – ON GROUND LEVEL 30'0" SUP PER UNIT.
GIRLS – 10'0" SUP PER UNIT G^D LEVEL / 20'0" " " ROOF " } = 30'0" " " "
INFANTS ON G^D LEVEL 16'0" SUP PER UNIT.

Plan for a Recently-built Elementary School in London
THE BLUNDELL STREET ELEMENTARY SCHOOL, ISLINGTON, LONDON N.

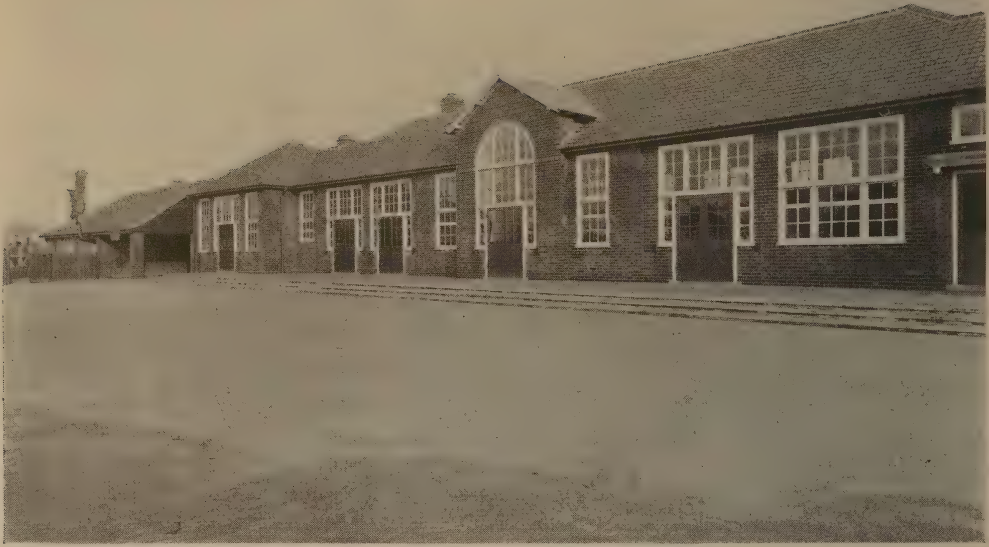


—— FIRST FLOOR PLAN ——

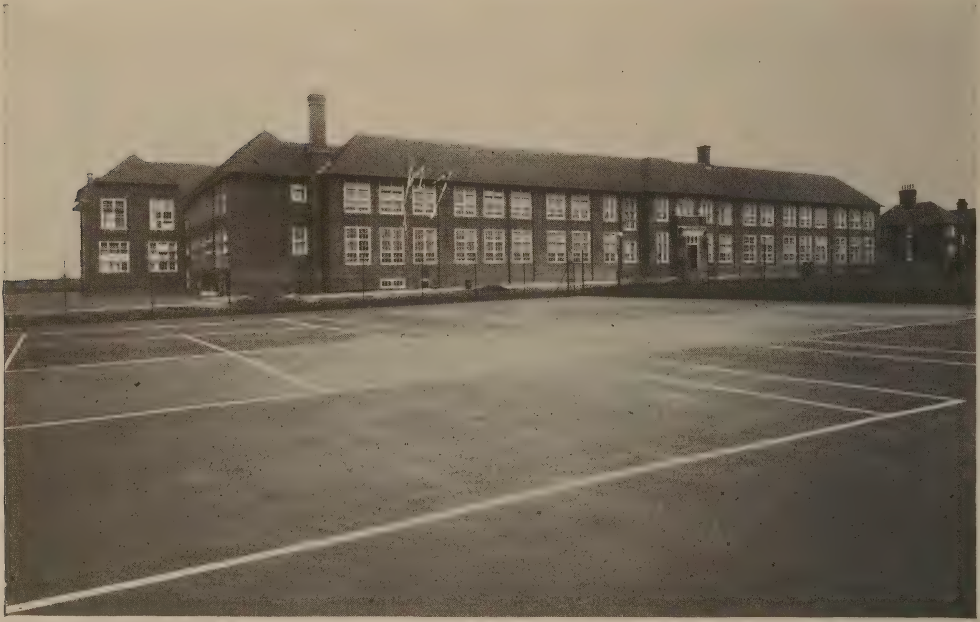


—— GROUND FLOOR PLAN ——

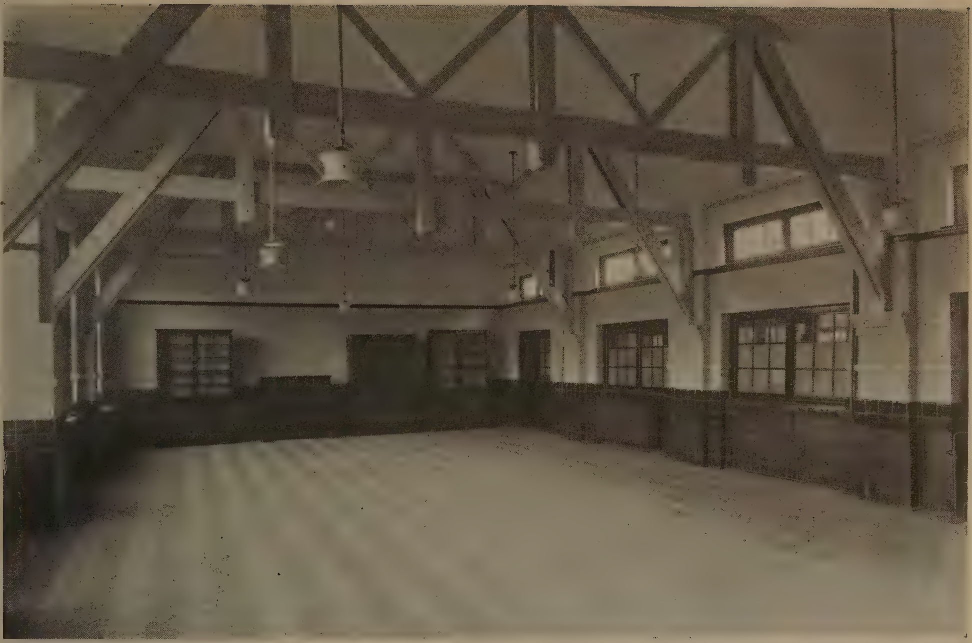
Plans for a Recently-built Secondary School in London
TOOTING SECONDARY SCHOOL, BEECHCROFT ROAD, LONDON, S. W.



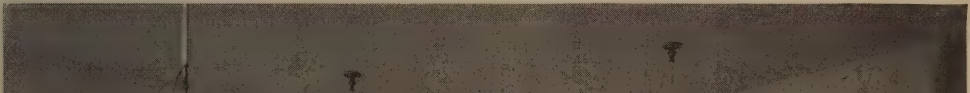
The Infants' Department
DOWNHAM ELEMENTARY SCHOOL, LONDON, S. W.



A Secondary School of the latest type
TOOTING SECONDARY SCHOOL, BEECHCROFT, LONDON, S. W.



Hall, Boys' Department
DOWNHAM ELEMENTARY SCHOOL, LONDON, S. W.



Infants' Classroom
DOWNHAM ELEMENTARY SCHOOL, LONDON, S. W.

CORRIDOR, INFANTS' DEPARTMENT, DOWNHAM SCHOOL, LONDON

Heating in American schools is by means of radiators and low pressure steam, with the air heated and washed, whereas in London a low pressure hot water system with radiators and cast iron sectional boilers is used. In the Babies' rooms open fireplaces are provided, supplemented where necessary by radiators.

The largest school accommodation in London is for 1,500 and the tendency now seems to be to provide for even a smaller number than that.

London's secondary schools are, of course, superior to the elementary. Accommodation is provided for twenty, twenty-five, or thirty pupils in classrooms, and 16 to 18 sq. ft. floor area is allowed per unit. Auditoriums are provided for more than one hundred and fifty pupils with a floor space of five sq. ft. for each pupil. The cloakrooms are provided and arranged so as to obtain cross ventilation, and are heated by radiators. The various kinds of London secondary schools, for academic, commercial. vocational or manual training, contain special rooms such as the library, drawing room, science laboratories, manual training room, cookery, art room as are needed. Dining rooms are also provided for 50 per cent. of the pupils, but there are no medical or clinical rooms in the secondary schools. Swimming baths are not provided in the intermediate and high schools, as in London it is customary to provide accommodation for not more than 500 pupils of one sex only, whereas in American high schools the place accommodation provided runs as high as 3,500 to 5,000

The cost of building a school in London on the basis of the expenditure for the place for each pupil is $150 to $250, as compared with $75 in 1914.

BOSTON DRY POINTS

By
Hubert G. Ripley

IX. The Old Granary Burying Ground

The Old Granary Burying Ground lies on the westerly side of Tremont Street between the Tremont Building and Park Street Church. It was established about 1660 and takes its name from the Town Granary which once stood there. The yard level is about three feet above the sidewalk and rises gently to the west where it is terminated by the hederigerant walls of the Boston Athenaeum and other buildings. One of these buildings is the Union Club, and a graceful iron balcony, overhanging the yard, runs in front of the tall casement windows of the billiard room on the main floor.

During the Summer months this is a delightful spot, most pleasantly obumbrated, and previous to July 1, 1919, every afternoon between five and seven, daylight saving time, Lovell Little, Bob Bellows, and Ralph Gray could be seen seated there in wicker arm chairs, ruminating on the permutations of cosmic existence, and studying the detail of Peter Banner's and Solomon Willard's Park Street Church.*

From time to time they would pause in their conversation, the while thoughtfully and reverently raising to their lips tall glasses containing an amber liquid that filled the interstices between particles of finely shaved ice. The ice was level with the brims of the glasses and their summits were crowned with an herbulence of mint, slices of orange and pineapple. There was a thick coating of frost on the outside of each glass and little wisps of aromatical fragrance, as of the Elysian Fields, floated softly in the Summer air, mingling with the scent of flowers and the lazy drone of honey bees.

Sometimes in Winter after a sleet storm, or when the snow falls quietly in dazzling white flakes, the Old Burying Ground is transformed into a fairyland in the heart of the city. When "the groaning woods yield 'neath the pressure of one pile of snow—and frost whitens all the lea,"* then before a fire of heaped up logs in the hospitable dining rooms, gathered 'round a steaming jorum of Talabogus, one may picture Daniel Webster, Charles Dickens and Edwin Booth gazing out of the shuttered windows of the Old Tremont House on the scene.

On the northerly side of the Old Granary is Tremont Place. A large office building now covers the spot formerly occupied by the Architectural Club. In Beacon Street and the westerly side of Tremont Place, during the early nineties, there were harmonious rows of dignified old houses, the Old Tremont House filling the lot between Tremont Street and Tremont Place and extending from Beacon Street to the Burying Ground.

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* Considered by many to be the best remaining example of early XIX century ecclesiastical architecture in the city. Its graceful spire picturesquely punctuates the corner of Park and Tremont Streets. Charles Edward Hooper, in his poem, "Immortals," recognizes the influence of Sir Christopher Wren in the design of the spire, in the lines beginning:

> "As for Sir Christy, legends say,
> His roving spirit still
> Doth haunt the upper story near
> The bone-yard on the hill."

Peter Banner was an English architect of some repute. He made the scale drawings for the church, which were often the only drawings the builder had in those days, but in this case Solomon Willard, who was as meticulous as Strickland, Blodget and Law or even Jo Chandler himself, made careful full sizes of all the capitals, urns and ornamental parts.

*Hor. Car. I. 9.

The contrast to its present "improved" appearance is striking. A more diversified group of ill-assorted buildings could hardly be imagined in any city. The block bounded by Tremont, Park and Beacon Streets contains about five acres and in the early half of the previous century, it was a splendid example of civic art, rich in historical association and a source of justifiable pride to the inhabitants of Modern Athens and to the nation.

The Old Granary contains the remains of a large list of notables, provincial and colonial governors, signers of the Declaration of Independence, celebrated preachers, chief justices, founders of societies, and statesmen. The headstones and monuments are rich in inscription, detail and proportions. The sturdy cast iron fence and splendid granite gate and terminal posts are of a later period, about 1810 or 1820.

Quincy granite never had a finer surfacing given it than these gates show. The art seems to have been lost since 1850 as the present way of treating it is coarse and vulgar in comparison.

From the front windows of the P. D. Club in the garret above the Architectural Club, a fine view could be obtained of the stately Elms of the Old Granary, and the window seats were favored lounging places in Summer and Winter. There was no irreverence intended in the assumption of names of famous men by the members of the club, as it may be conceded that the Great Ones had their lighter moments.

Garnier Frères was the keeper of the archives of the P. D.'s and the records still exist from which a few extracts may give a glimpse of the life of draughtsmen in Boston thirty odd years ago. Garnier and Ictinus were together in the club late one afternoon when San Gallo and Viollet le Duc entered, exhausted after a long walk and shopping tour around town. It was not evident at first that in both the visitors' heads "there was more than falls with the comb."

Then it was noticed that there were peculiar red streaks on San Gallo's face, one orb was closed entirely and the other only partly open. Viollet looked at him with wine-bright eyes, and, smiling dreamily, began to speak, "We're just from T Wharf," he said, "I met San Gallo at eight minutes to twelve this noon, and have been trying to get him back to his office ever since. It is now six and a half and here we are!"

"There seems to be material here for study and use, and I move that Viollet le Duc be elected toastmaster—second the motion—it is a vote," said Garnier. The prescribed rules of the constitution being thus carried out, Viollet was at once inducted into the chair.

Like—

"Unfaded Amaranth, when wild it strays
Through the old garden-ground of boyish days,"

his hair he softly brushed aside, saying, "Is there any regular business to come before the meeting?"

"I move that our first concern be to enquire into our present status," said Garnier.

"Speech is silver, silence is golden, but indigestion is leaden—however, we digress," replied Viollet as he arranged a mass of papers in order in front of him. "I have here the synopsis of a play. The idea of the play is to paraphrase architecture and show up its abuses. The time is 390 B.C."* At the conclusion of the reading of the play its author gave an account of his afternoon's wanderings.

"San Gallo and I started out to take a trip to the Banks of Newfoundland, and the first necessity was, of course, a good

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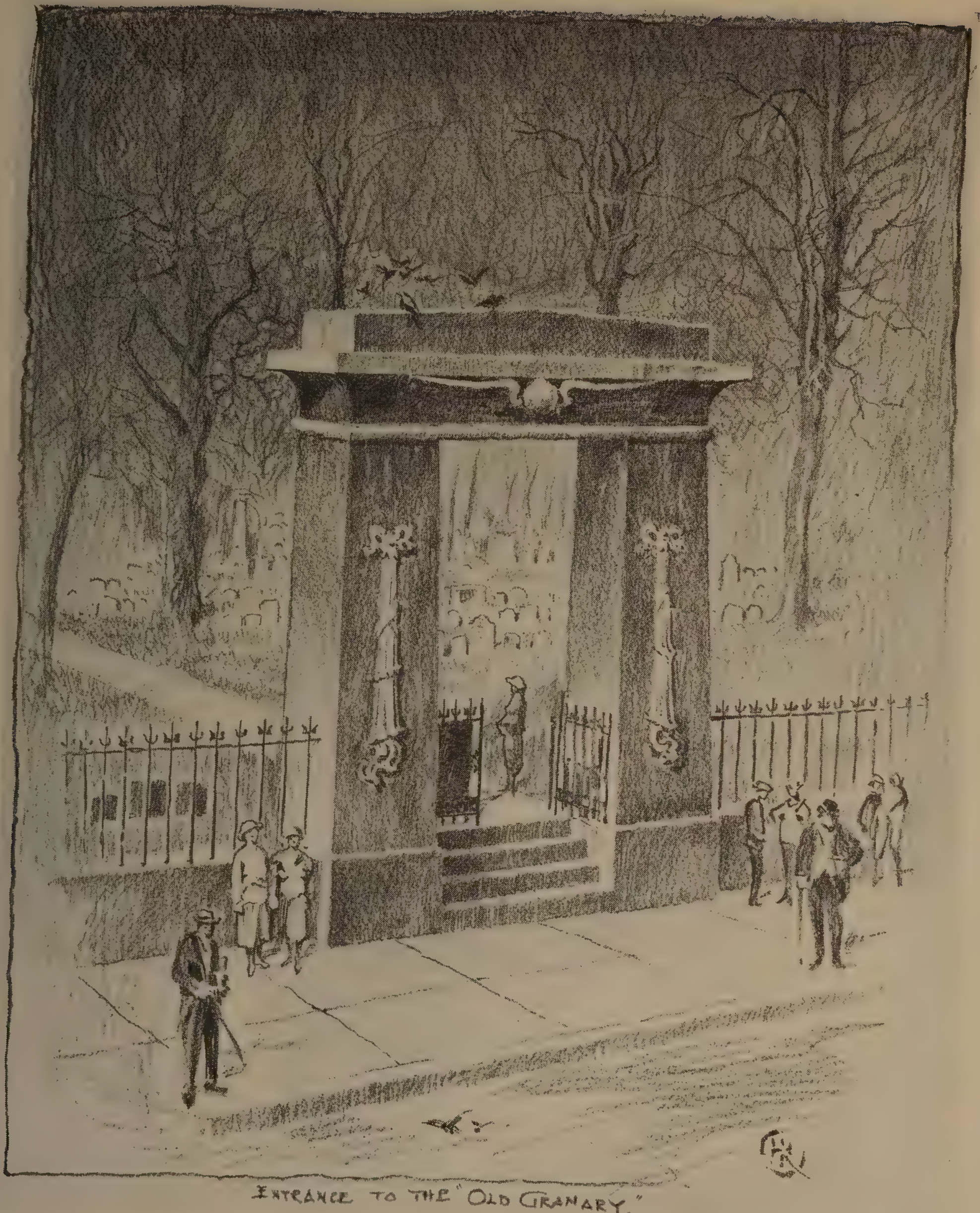
*Note—Unfortunately the ms. of the play cannot be found. It is believed that it is incorporated in the concrete footings of No. 6 Beacon Street, the office building that now covers the spot where these events took place. The reading of the play created a great sensation at the time and active steps were taken toward its production, stage and scenery being built, properties and costumes gathered and all arrangements made for its première. It was most regrettable to discover at the last moment that, distracted by the multitudinous detail that preceded its production, it was found that the cast, comprising the entire membership of the club, had neglected to study their parts and so the play could not be given.


ENTRANCE TO THE "OLD GRANARY."

The Architectural Record

December, 1926

THE OLD GRANARY BURYING GROUND
Drawing by Hubert G. Ripley

foundation. We stopped at the 'Bell-in-Hand,' on the outskirts of City Hall, where we had a 'half-with-a-dish' and a mutton pie. As we were about to leave, we met a friend of San Gallo's who persuaded us to remain and further refresh ourselves, so we remained. By-and-by it got to be two o'clock, so we started for T Wharf again, stopping on business at a place called 'Conklins.' We had 'one' then another, then another. We found our way out and started for the wharf once more, stopping on several occasions to do some 'errands' we had neglected to do up to that time. When we arrived at T Wharf we could find no steamer for Newfoundland, but seeing a large sign which read 'Cunard Steamship Company,' we gave up the idea of a Newfoundland trip and decided to go to Europe instead.

Costume study for "Carrie H. Tide," heroine of Viollet-le-Duc's play. Although the time was 390 B.C., the P. D.'s believed in presenting the classics in modern dress.

"We inquired of the clerk in charge when the next boat sailed. He said in two weeks — would we wait? No thanks, we thought we wouldn't wait, so we left that place and wandered along until we came to a square called 'Maverick' after a race of Texans. There, on all sides, were large and spacious signs advertising the fact that 'Gahm's Milwaukee,' 'Val Blatz's St. Louis,' 'Bass & Co.'s Pale,' and other such were for sale. We went into the nearest place and had 'one,' then another, and then another. It was warm and comfortable in there, so we stayed awhile. When we left, we came to some tracks where we waited for four hundred freight cars to pass. After they had passed, we discovered that the place where we wanted to go was on this side of the tracks, but we walked across the tracks and back again as a matter of form. We came right back to the place we had just left and refreshed ourselves at some of the signs. Then we took passage back to T Wharf on the ferry boat.

"The lights were just being lit, and their elongated reflections were dancing about in the shimmering waves. We sat up front on the gang chains and sang some Scottish airs. This time we were not asked to stop, we were hit on the back with a club. We stopped.

"Leaving T Wharf we went and had some ale. Seeing a place where they were vaccinating people gratis, we went in and were much interested in watching the operation of a worthy municipal charity. We did not try our luck, however, and somebody spoke to us and asked us to go outside and see if that wasn't the place we weren't looking for. We went outside and then we went and had some oysters and something to drink. Wandering along, we naturally wandered hitherward and here we are!"

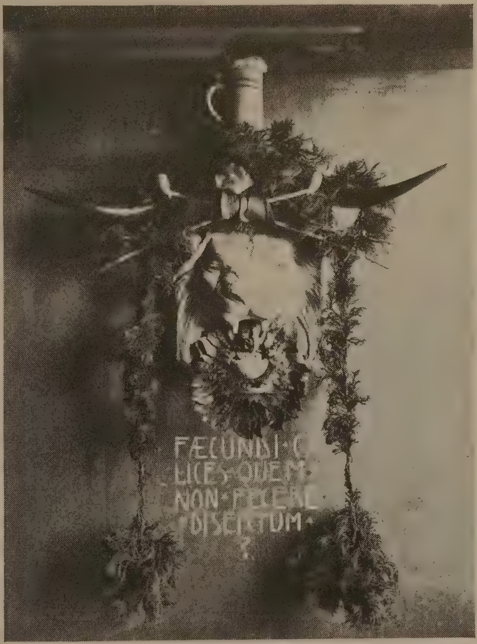
Viollet-le-Duc paused, passed his hand over his brow, collected his papers, relighted the end of his cigarette, arose and carefully steadying himself, reached for his overcoat, put it on and departed.

During the narration of this saga of the sea, the company was augmented by new arrivals, and preparations made for a meal. The quaint and time-honored custom of "rushing the growler," (an obsolete term whose meaning is understood by but few) was practiced, while Vitruvius, the Brillat-Savarin of the company, fried a few yards of country sausages on the chafing dish borrowed from the Architectural Club. After the sausages were nicely browned—Vitruvius was very particular that they should be just the right color, crisp and smoking hot—they were placed in a covered tin on the hearth near the wood fire. Next, eighteen fresh eggs were broken carefully into the dish from which the sausages had just been taken, the hot fat serving as an ideal friture. A little chopped parsley and a spoonful of Tarragon vinegar were sprinkled over them and the whole allowed to cook slowly under cover.

During the meal plans were discussed for the forthcoming periodical, for while the reputation of Boston as a literary center was beginning to wane, the old urge ran strong and it was a cherished ambition of the P. D's to blossom out in print.

The evenings of the P. D.'s invariably closed in song. Every member had his special song, and it was considered discourteous to omit its recital when he entered or departed from the Club Room. The meeting just referred to was typical of many, with variations as to detail. Special meetings were held on holidays, pay days, and in honour of distinguished guests when the entertainment provided was of a far more involved and elaborate nature.

This little society was peculiar to its time and place. Conditions and locus were favorable. It brought sunshine into many lives and did its share in making the town a pleasant spot for work and play.



The P. D. Arms. Designed and built by Sody on Christmas Eve, 1893, from materials in the club room. A plaster cast, a pair of old buffalo horns from which healths were pledged, pipes, beer mug, and evergreens from the decorations. Sody also found the motto (Hor. Car. IX 93), and made the photograph. The P. D.'s had two mottoes, the above and "In Bock Signo Vinces." Life is like that!

EUROPEAN STORE FRONTS *and* WINDOW DRESSING

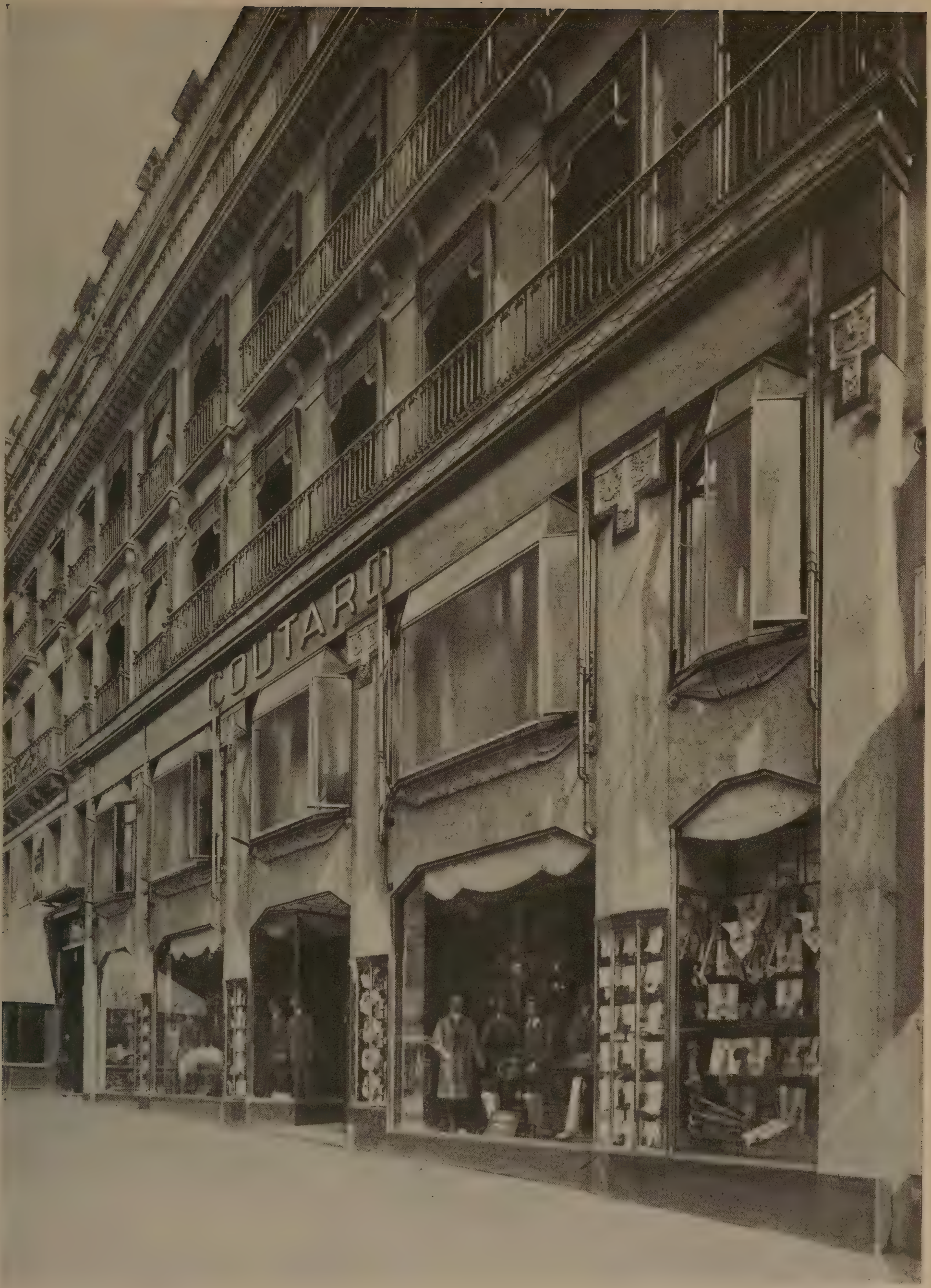
By Clinton H. Blake, Jr.

One would expect to find the window displays in the foreign shops, especially those in England, simpler and perhaps richer in some ways than the window displays in the American shops. The natural conservatism of the Englishman, and his distaste for anything remotely resembling "show," might reasonably be expected to produce an extreme simplicity in his window displays. Limited and simple displays would be in keeping, also, with the lack of ornamentation which, as we have seen, characterizes in general the British shop-fronts.

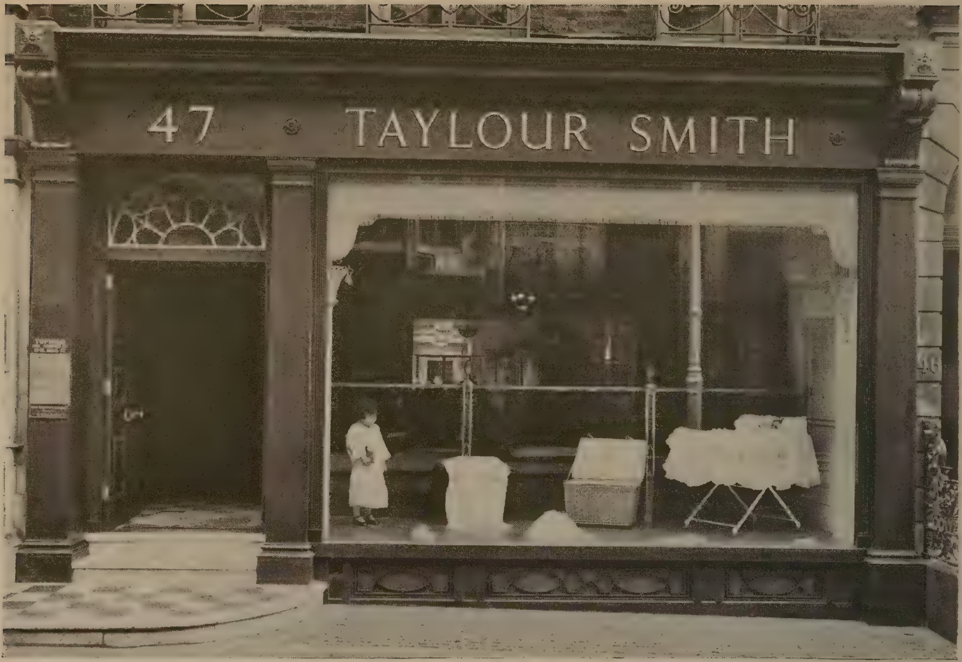
So far as the window displays are concerned, the result is not, however, what one might reasonably expect. A careful observer will note that it is in the windows of our American shops that we find a tendency to concentrate on a few choice exhibits and on a combination of simplicity and richness, rather than in the windows of the shops of London or, for that matter, of other capital cities abroad. With a few notable exceptions, the English shop-keepers and the shopkeepers on the continent are prone to load their windows with a great quantity of merchandise. Their desire and purpose, apparently, is to show you, so far as the limitations of their window space allow, a sample of everything which they can offer to you within. Very few of them, apparently, have appreciated the psychology which dictates the ordinary high-class window display in this country. They do not attempt to arrest the attention of the shopper or passerby by a restrained and artistic window effect. They depend rather on catching his attention by showing to him some article of merchandise in which he may be interested. Theoretically, this may be logical enough. Practically, the effect of an over-crowded window, containing a heterogeneous mass of different merchandise articles, is not calculated to induce the man in the street to become a purchaser. It may well be that some one of the articles in the window would appeal to him, if he were to make a detailed study of the display to find it. The effect upon his eye, however, is not such as to induce him, ordinarily, to make any such examination, but on the contrary to pass the window by as confusing rather than interesting.

The French and Italian shops are, many of them, worse offenders in this respect than the English shops. A few of the higher class shops in Paris, in the richness, simplicity and artistic effect of their window displays, will hold their own handsomely with the best corresponding displays in America. On the whole, however, the Paris shop-keeper follows the system of over-display, rather than restrained display. Anyone who has traveled in Italy will realize that the same is true of the Italian shops and that they are probably the worst offenders in this respect. No one who has strolled along the shopping streets of the larger Italian cities or given any attention to the displays in the thousand little shops of Venice can fail to have been impressed with the tremendous amount of "junk" with which their windows are loaded. The ordinary shop window in Italy displays in a mixed mass articles of rare beauty and value and articles which would much better have been sent to a rummage sale. It may be that this type of window-dressing appeals to the Italian shopper. To one to whom the simple artistic displays of the New York shops are familiar, however, it can not fail to seem to be poor merchandising.

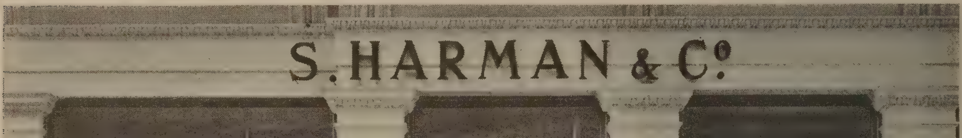
In England and on the continent, also, there is still in use quite generally the



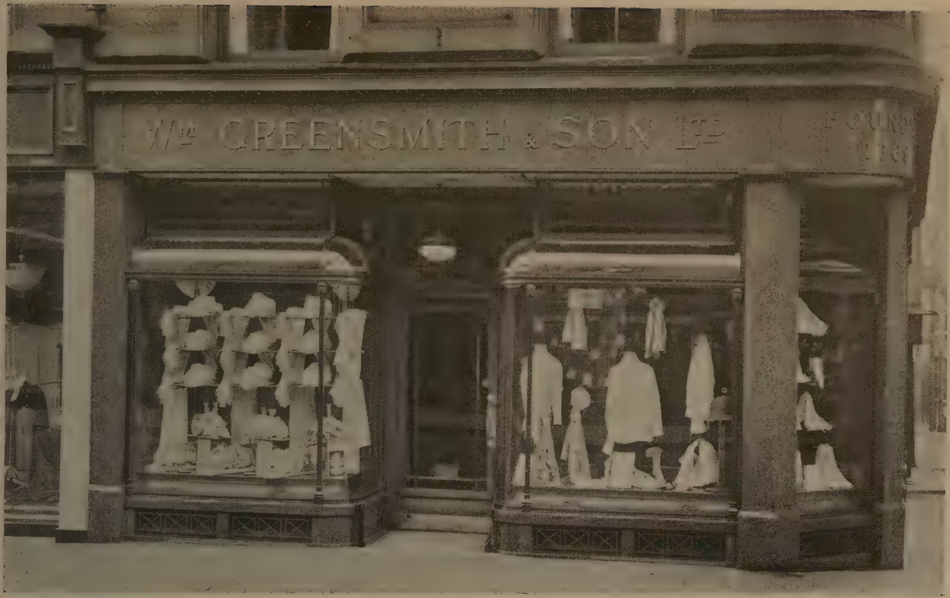
MAISON COUTARD, BOULEVARD MONTMARTRE, PARIS



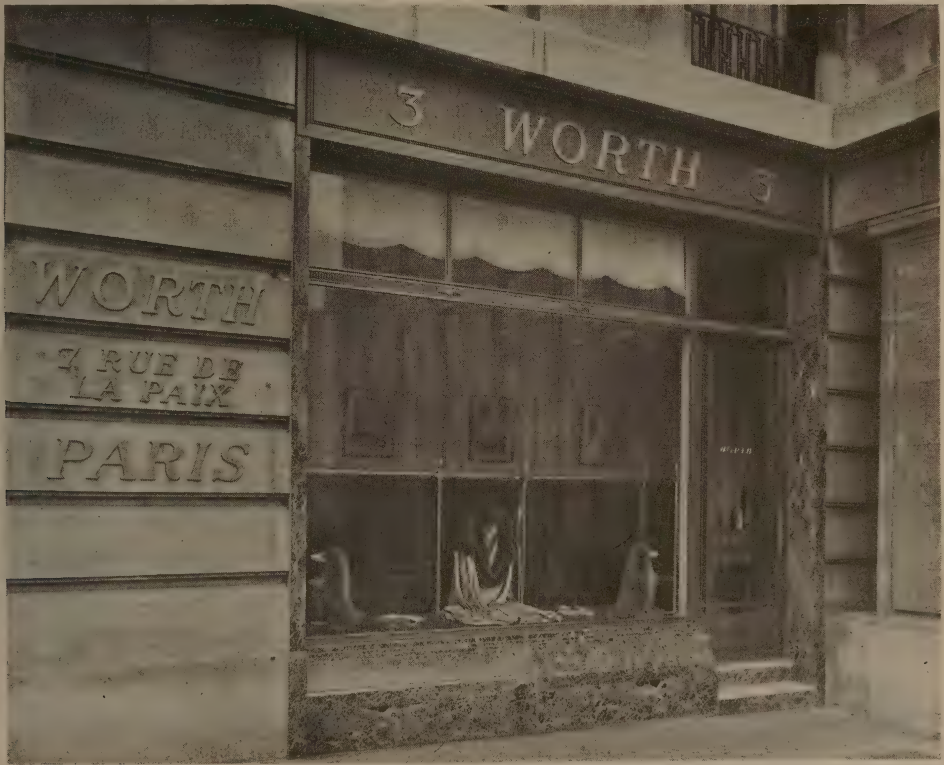
AN ATTRACTIVE SHOP FRONT IN CONDUIT STREET, LONDON, W.
Carried out in French polished oak



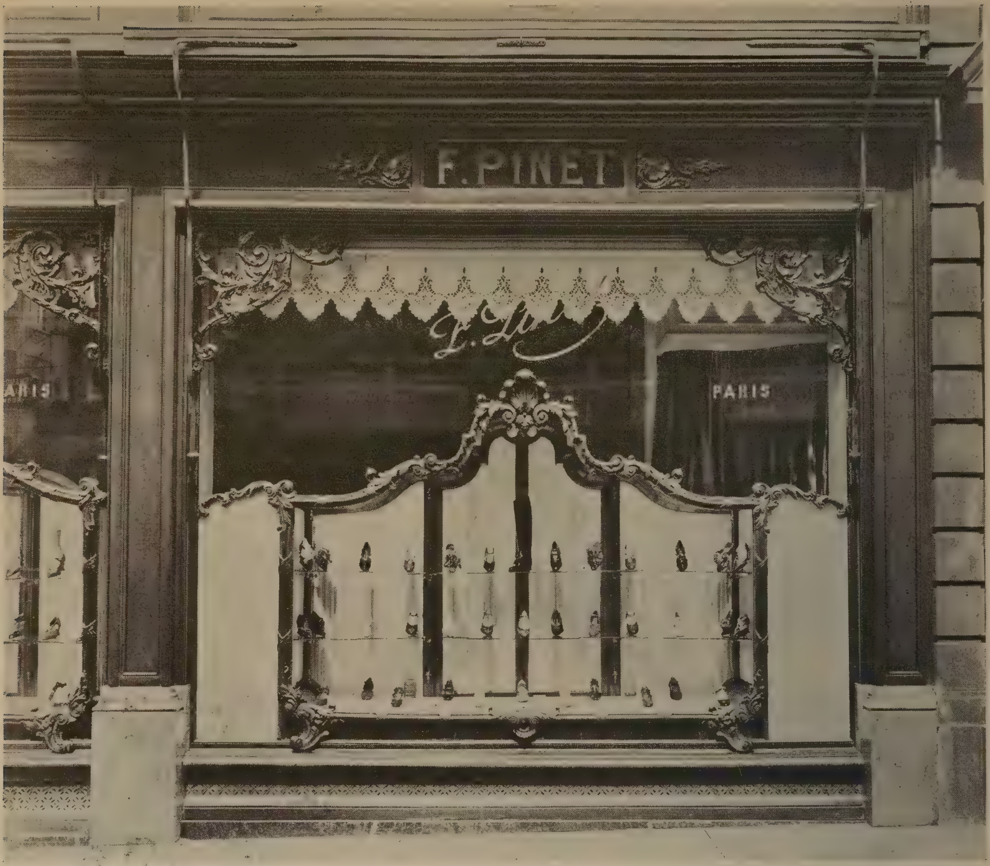
SHOP FRONT OF MESSRS. S. HARMAN & CO., DUKE STREET, LONDON, W
The showcase window type in bronze metal with blue marble stall risers. The name is carried out in black mahogany raised letters fixed to the stone fascia and the doors are of polished mahogany.



A SHOP FRONT IN LEEDS, YORKSHIRE
Carried out in granite and bronze metal



THE LONDON HOUSE OF WORTH IN HANOVER SQUARE, W-1
The shop front is carried out in green marble, with bronze metal fascia, sashes and entrance door

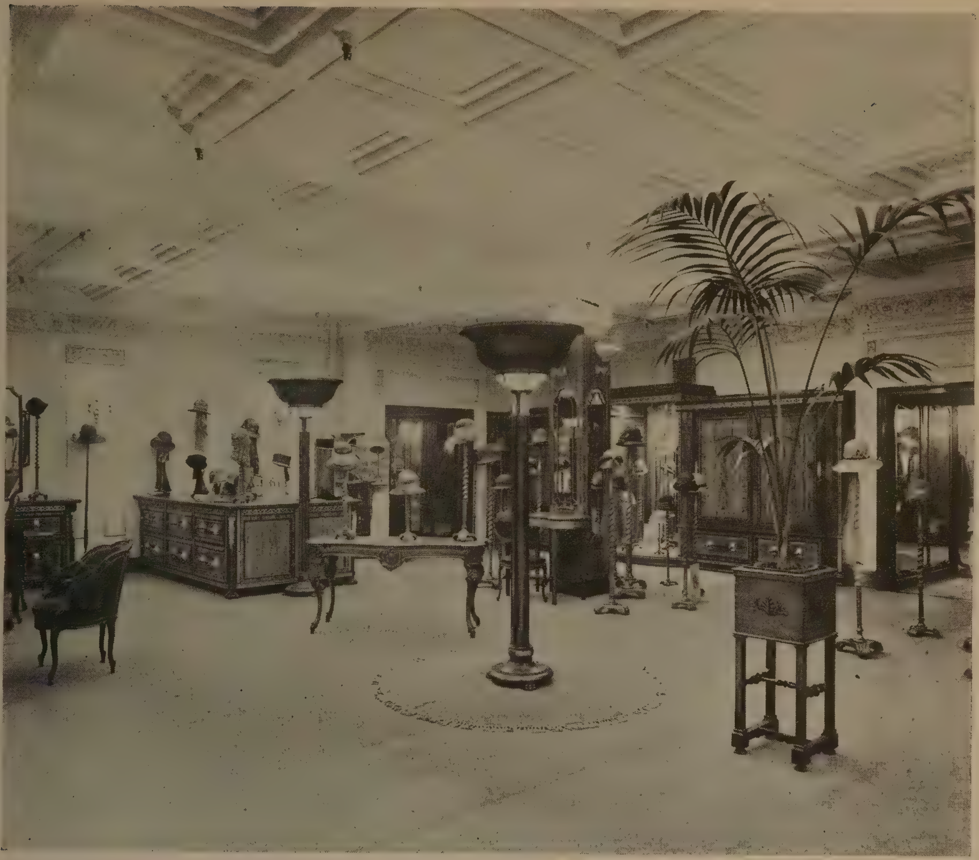


SHOP FRONT OF MESSRS. F. PINET IN MADDOX STREET, LONDON, W.

system of suspending merchandise from brackets and from hangers. This scheme was discarded some time ago by the better shops in the large American cities. There can be no question that the present day methods of display in the American shops are far superior to the old type bracket and hanger displays, infinitely less artificial and far more artistic and generally attractive. The modern methods are followed with great success by a few of the finer shops on Bond and Regent Streets and on the Rue de la Paix.

The foreign shops, too, are far behind those of America in the use of electricity as an aid to the window-dresser. Artistic and clever window-lighting is now a characteristic part of the window displays in most of the better class American shops. The subdued and unobtrusive lighting and the general effects secured by proper attention to the potentialities of window illumination have been far better appreciated here than abroad.

An exception to the foregoing general comparison should, I think, be made in the case of retail tobacco shops here and in London. For some reason, the window displays of the London tobacco dealer are far superior, as a rule, to the displays of the corresponding dealer in New York and elsewhere in this country. The ordinary tobacco shop of London has far more character and dignity than has the American shop. Its windows are less laden with miscellaneous merchandise and the general effect is altogether preferable. This exception to the general rule is a curious one. It is difficult to determine why the retail cigar and tobacco shops in this country should not follow the tendency of the other Amer-



MILLINERY DEPARTMENT OF MESSRS. HARRODS, LTD., BROMPTON ROAD, W

ican shops with respect to window displays. There are, of course—in New York especially—some exceptional cases, where the window displays in these shops compare favorably with those of the other New York stores. The fact remains, however, that in this one field, the American merchant seems to have adopted rather the general English window-dressing procedure and the English merchant to have adopted something of the simpler and richer display procedure of the American merchant. It is a curious transposition of customs. It may be that there is something in the psychology of the lover of tobacco that can account for it!

There must always exist fundamental differences in the treatment of shop-fronts and window-dressing among different peoples. The national characteristics of any people are and will continue to be reflected in the shops of which they are customers. The tendency, however, will be undoubtedly toward a more careful and artistic display of goods abroad as in this country and toward a realization that a display arranged with due regard to restraint, to purchasing psychology and to artistic effect may be a very potent factor in the up-building of any retail business.

ANDREW C. McKENZIE

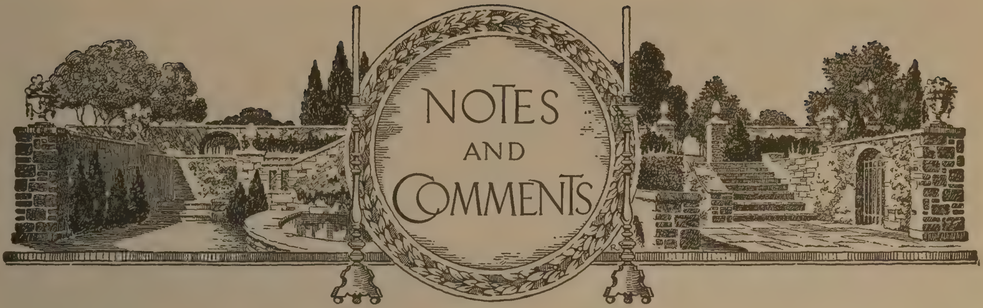
1861-1926

Andrew C. McKenzie, senior member of the firm of McKenzie, Voorhees and Gmelin, died suddenly at his home, 297 East 18th Street, Brooklyn, New York, after a severe attack of indigestion, on Sunday morning, October 10, 1926. He was born in Dunkirk, New York, and was educated in Buffalo.

He came to New York City in 1884, where he became associated with Babb, Cook and Willard. He was later associateed with Cyrus L. W. Eidlitz, with whom he became a partner in 1902, at which time they designed the Times Building. Upon the retirement of Mr. Eidlitz in 1910, the present partnership with Stephen F. Voorhees and Paul Gmelin was formed.

While a member of this firm, the West Street Building of the New York Telephone Company, the Telephone Buildings in Albany and Buffalo, the Brooklyn Edison Company Building, the Municipal Building of Brooklyn, and many other buildings, were designed and constructed.

Mr. McKenzie was a member of the following societies and clubs: The American Institute of Architects, the Architectural League of New York, the Union League Club, the Canadian Club of New York, the Railroad Club, the Briar Hills Country Club, and St. Andrew's Society. He took a keen interest in the city's development and was on the City Planning and Survey Committee of New York.



The Roosevelt Memorial Site

Congress authorized The Roosevelt Memorial Association to secure a design to fit artistically a designated area in Potomac Park. On this West Section of the park the Washington Monument, the Lincoln Memorial and the Roosevelt Memorial would form a great artistic composition.

The only conditions in the resolution, approved Feb. 12, 1925, were that recreation and traffic must be considered and that no work should be done on the site before Congress approved the design. The competitors were instructed, while emphasizing Roosevelt's accomplishments, to make the design a part of the proposed landscape. The best design, by John Russell Pope, embodying the above principles was selected by a competent jury and submitted to Congress in accordance with the resolution before Jan. 1, 1926. We could believe that the Roosevelt Association, having complied with all the requirements of the act, had only to await the decision of Congress on the design as the next step under the resolution. The drawings having been before Congress for some months, a tendency developed not to consider the merits of the winning plan, but to question the right of Roosevelt to associate with such distinguished company as Washington and Lincoln.

Impressed with the dignity and beauty of this design, I fully appreciated how it would complete the West Section of the Park Commission Plan. I was writing about it when the feeling in reference to the site was called to my attention. I naturally began to sum up what Roosevelt had done to make him worthy of such association. Remembering events of national importance which impressed me at the time, I soon had an imposing list.

He put the Civil Service on a practical and high plane, so that merit is rewarded; made our Navy so efficient by active drill that it gave a good account of itself in the Spanish War; made a living thing out of the long moribund Panama Canal, to the great benefit, economically, of America and the world. He interested the people in the preservation of our national resources, that their descendants may have, not an arid waste, but a country full of nature's gifts; made the desert bloom, by irrigation, thus adding greatly to the country's productive area; kept us from war by preparing and showing the world we had an adequate fleet. After negotiating peace between Russia and Japan he was awarded the Nobel prize. It was through Roosevelt's wide interest and energy that we have more than a fair beginning of a National Gallery of Art. Intelligently interested in athletics, politics, nature, science, literature and art, he was ever ready to make this knowledge useful to the people. Ninety per cent. of our Presidents have been routine plodders—he was one of the few who had creative energy. Roosevelt, preëminently a crusader battling for right, justice and truth, vitalized the conscience of the people. He fought to preserve nature's gifts—to instill vigor and honor into young and old and to mold the varied and often antagonistic elements of our population into patriotic citizens. Roosevelt was alone—among our Presidents—in these wise and serviceable actions.

Although I felt personally satisfied that Roosevelt was entitled to a place in the park, I desired an opinion to satisfy the most skeptical; therefore I called upon that intelligent and broad-minded statesman, Elihu Root, who was kind enough to receive me and listen to my request.

Roosevelt, he thought, deserved a memorial on the Potomac in the landscape composition with Washington and Lincoln. The most important service Roosevelt rendered the country, he said, was in uniting and harmonizing capital and democracy. Few of us, I among the number, appreciated this service. He continued: There was a growing antagonism between classes, Roosevelt's wise and frequently uncomprehended actions saved this country from the disastrous condition now prevalent in Europe. While he did not go into details, let us consider briefly the foreign conditions mentioned. To save their countries from anarchy the people have delegated their control to Dictators in Spain, Italy and Turkey. France is in such a chaotic state that many think a dictator might become a savior. A universal strike in England against the Government, not against individuals, many might consider traitorous. Russia is in the worst throes of anarchy the world has known. We neither desire the dictators nor want the anarchy.

We honor Washington for founding an independent Republic, after a long and trying revolution brought on by intolerance. We honor Lincoln for preventing the disruption of this Republic and maintaining the Union of States through a long and bitter Civil War. We should honor Roosevelt for preventing the dissolution of the Republic through clashes between classes.

The analogy between Washington and Roosevelt in their relations to the Fine Arts is unique. They were the only Presidents to use the fine arts as a lever for the elevation of the public. They sought and obtained the most capable artists of their day. While Washington gave commissions to Thornton, Hoban, Gilbert Stuart and Houdon, Roosevelt advised with and commissioned McKim, Saint Gaudens and Millet. They were the only Presidents who had shown any interest in and appreciation of a park on the Potomac with a practical and artistic grouping of Federal buildings. Their interest in city and landscape treatment was uncannily similar. Washington called in L'Enfant, and the great plan for a Federal Capital was the result. Roosevelt from its inception supported the renovated L'Enfant plan presented by the Park Commission. His intelligence and energy helped the scheme through many trials; without his aid this wonderful vision would not have materialized into a reality. He re-established the plan left by Washington and brought it again to the attention of the world. This landscape now beautiful and attractive will, when completed, be one of the great artistic compositions of the world.

It is just and fitting that Washington who conceived it and Roosevelt who nurtured and brought it to manhood should have a resting place for their memorials upon its sacred soil.

GLENN BROWN

An Architect's "Confession"

Certain photographs of country houses submitted for our November issue moved Prof. Kocher to enquire the architect's reason for the selection of the design chosen —what was the underlying problem to be solved?

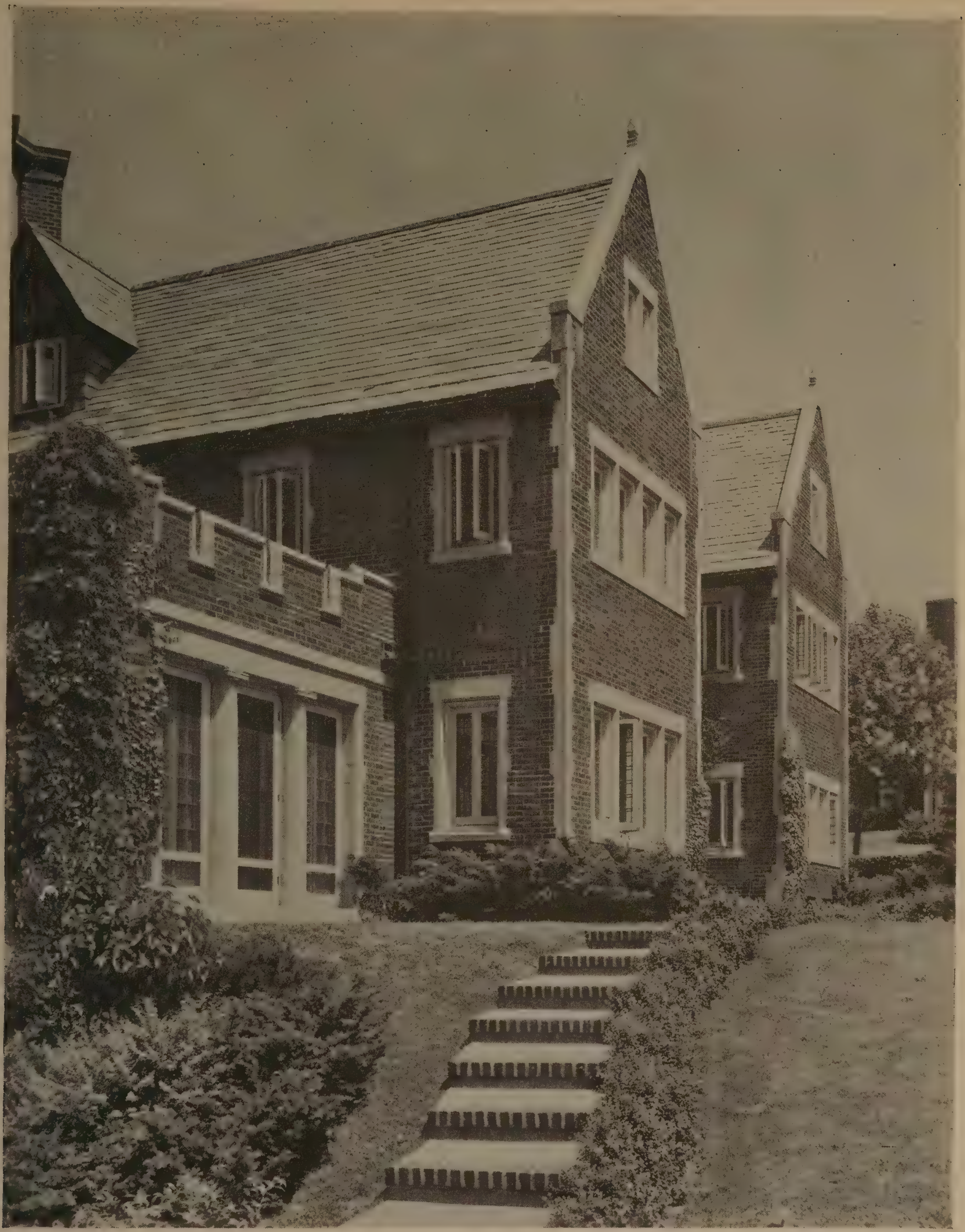
Among the replies was one of such an edifying nature that we feel constrained to give our readers the benefit of it, so here it is in full:

My dear Professor Kocher:

You have been kind enough to ask me to tell you of the problems we were called upon to solve, our hopes and fears, our disappointments and our triumphs, in the design and arrangement of the William Gray House. For the architect to thus bare his soul to the pitiless gaze of a critical public is something of a wrench, but if it will be helpful to the thousands and thousands of bright-faced young aspirants, who sit on the steps of the throne of the Hesperides, we will reluctantly make the sacrifice.

As you so truly say, the designer embarks on a new project with a consciousness of a more or less open mind, where it comes to the question of "style." The arrangement, the exposure, and the setting are too often not entirely fortuitous. It is here that our English brethren possess a great advantage, due to climatic conditions. How many times have we seen a particularly fascinating house, so eminently suited to its environment, and satisfactory in every way, that, stripped of the warm embrace of vines and the artful aid of enshrouding frondage, becomes quite jejune and hackneyed! How many times have our parched souls longed for stately oaks, clipped yews, and climbing mezembryanthemums of old England to clothe our architectural nudities!

One Spring morning John Duff told us that William Gray had sold his old house. John Duff is a builder of no mean parts. He knows everything about building from test borings and quicksands to semi-gloss enamel paints and French wall papers; from vacuum steam pumps and combination floor slabs to shady lawn grass seed and cost accounting systems for sub-contractors. New England is fairly well sprinkled with schools, churches, public libraries, and domestic buildings, that are literally the work of his own hands, for there is no detail of construction that he cannot, and when the occasion demands, does not do. John had made extensive alteration at different times to the old house, and it was through him that we had "gradually" become acquainted with William Gray, by furnishing the necessary drawings for the operations. When somebody came along who wanted the house more than the Grays, seduced, who knows, by the beauty of our alterations, the place



RESIDENCE OF WILLIAM GRAY, ESQ., BROOKLINE, MASS.
Ripley & Le Boutillier, Architects

was sold and we acquired another job. The choice of "style" was quickly decided by Mr. Gray before we even had an opportunity to make a suggestion. He took us to see a house near Cottage Farm bridge, just across the street from the charming old Georgian mansion designed by Henry Pennell and George Newton. "I want a house like that," he said, "only I don't care for the chimneys and the bay-window, and the front door is too elaborate and the dining room should be on the other side." We gathered that what the Grays wanted was a house of brick and stone, with gables and chimneys and things. The office was just undergoing a period of athymy due to scarcity of jobs, so we tackled the problem with gusto and enthusiasm. The first tentative studies were shortly in form to discuss, and one hot afternoon Mr. Gray took us in his sporty Mercedes down to Allerton to talk them over with Mrs. Gray. The Allerton cottage is on the top of the hill about 200 feet above the beach and looks right over the roof of the Nautilus Inn, where Prichard and Dick Shaw and other noted people spend the summer months. There was a delightful breeze from the southwest and an excellent telescope mounted on a brass tripod on the front porch. We enjoyed them both until Mrs. Gray came down and spread the sketches out on a wicker table. "Billy," said Mrs. Gray, after she had studied the drawings for a few moments without comment, "tell Sarah to bring in a bowl of cracked ice and the shaker, my nerves need steadying. And Billy," she continued, "we'd better open a new bottle of that El Bart gin, the last one's empty, and tell Sarah to open a small can of pineapple and telephone for Mother to come over, I need her support." We waited in uncertainty and anticipation until Sarah in a starched apron appeared bearing a silver tray on which teetered the largest cocktail shaker we had ever seen up to that time (June, 1919), a Canton medallion bowl full of cracked ice, a small glass pitcher of pineapple juice and half a dozen thin-stemmed glasses.

A dignified silence was observed by all while Mrs. Gray artfully measured the gin and vermouth, pouring in three glasses of the former to one of the latter, with a slightly less quantity of pineapple juice. The exact proportion can only be learned after repeated experiments, but one is amply repaid for the labor expended in trying. Made as Mrs. Gray made them, agitated in the enormous silver shaker until our arms ached (we were allowed this privilege), and poured out, all foamy, into thin-stemmed crystal glasses, they came like a balm and a benediction. The conquassation of a two-quart shaker full of cracked ice and gurgling liquids, produces such a comfortable, jolly sound, inspiring celivagous thoughts and good will to all mankind! Mother had arrived and smiled indulgently and reassuringly as she delicately sipped her aperitif. We began to see how we could improve the sketches, and concentrated on the problem, as absent-mindedly we allowed the hostess to refill our glass. "Look out!" said Mr. Gray, "you'll distract the artist. Don't you see he's thinking?" "Don't interrupt, Billy," said Mrs. Gray, pouring out another generous dividend, "I want this to be a good house." Then she made a number of suggestions that called for more revision and more dividends. Dinner was announced and we all sat down to a delicately browned leg of Spring lamb, a great platter of green corn on the cob, picked that afternoon from the garden behind the tennis court, and strawberry shortcake. Haffenreffer's Golden Cream Ale accompanied the lamb and green corn, and the conversation ran on Early Italian primitives. We sailed back to town up the harbor into the setting sun, full of noble thoughts.

Other architects may boast of satisfied clients; we have listened for hours to their tales of how they won the undying gratitude of old Colonel Winterbottom, cold and stern to the outside world, but warm-hearted and grateful to his architects for the job they did on his country estate at Winter Harbor, or how the imperious Cordelia Featherstonehaugh, that familiar figure in the exclusive set of Wenham and Louisberg Square, wouldn't think of even moving a picture on the walls of her reception room, or changing the position of the Vernis-Martin kidney desk in her boudoir, without first telephoning for permission to her architect. We don't envy such as these in the least, for we "have fed on honey dew, and drunk the milk of Paradise." John Duff built the house and he built it honestly and well. There were many changes from the original contract, many "extras" necessitated by these changes. Through it all John chuckled until he shook like old Falstaff, and William Gray smiled serenely and said "Fine" to everything.

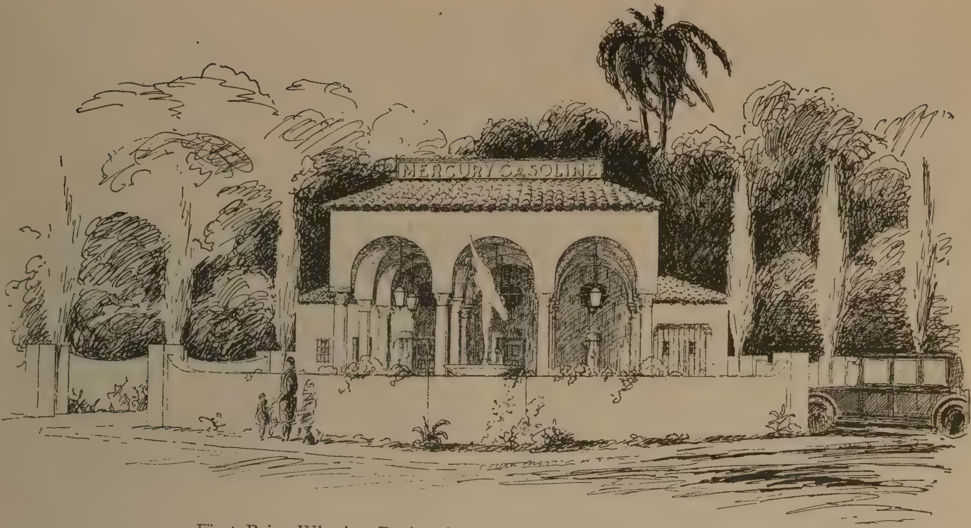
I hope that this brief account of how the architect works and the problems with which he is faced, will prove helpful to others and of significance to the general public. I can only add that in all our experience we have never had such a paragon among clients as William Gray.

Very sincerely yours,
Hubert G. Ripley.

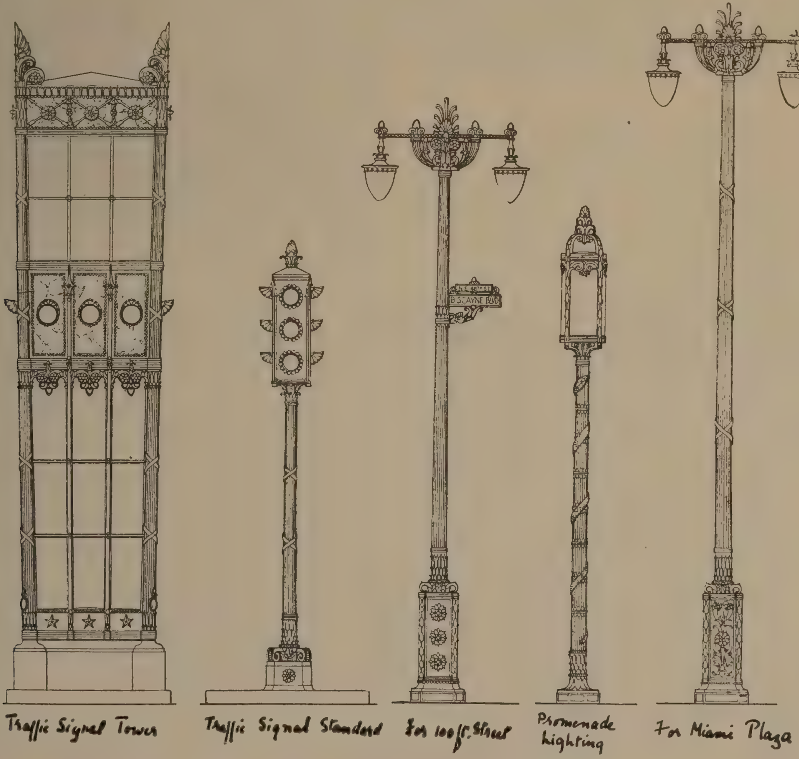
Boston, July 19, 1926.

A Correction

Our October issue, Page 351, contains a plate of the interior of the Congregational Church, Montclair, N. J. The credit line in this case should have read: "Bertram Grosvenor Goodhue, architect," in place of "Bertram Grosvenor Goodhue Associates," which unfortunately appears in error.

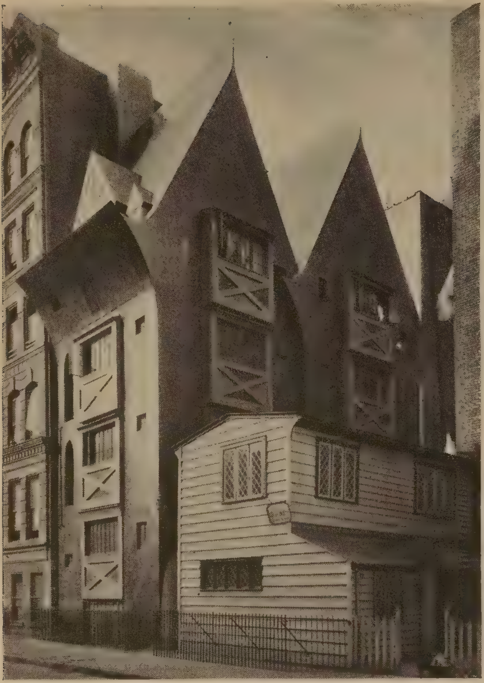


First Prize Winning Design for a Model Filling Station, Awarded to H. Roy Kelley, Los Angeles, California



First Prize Winning Design for Street Traffic Signal and Street Lighting Standards, Awarded to S. Grille, New York City

FIRST PRIZE WINNING DESIGNS IN TWO COMPETITIONS FOR BISCAYNE BOULEVARD, MIAMI, FLORIDA

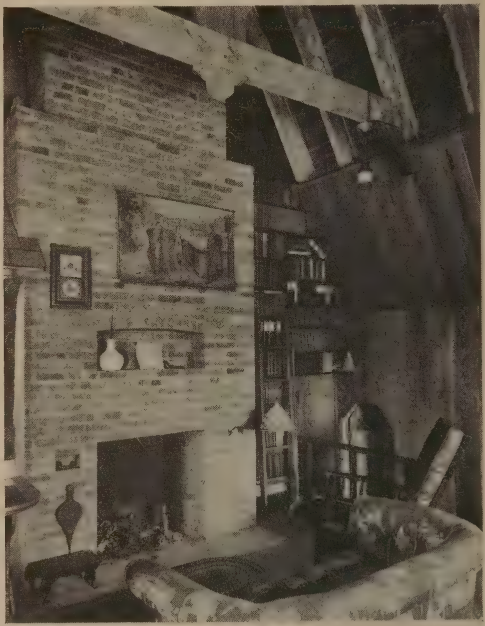


"TWIN PEAKS," 102 BEDFORD STREET, NEW YORK

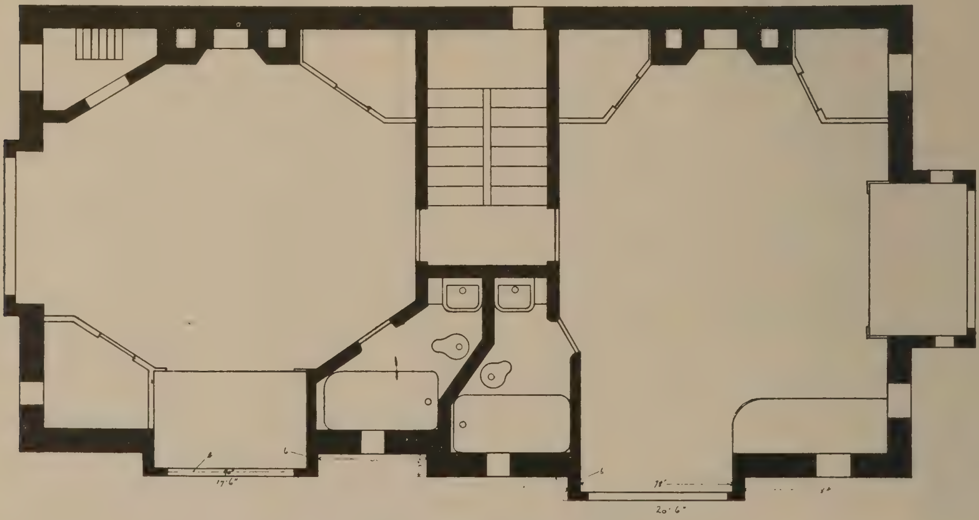
Designed by Clifford R. Daily

An Apartment House in Greenwich Village

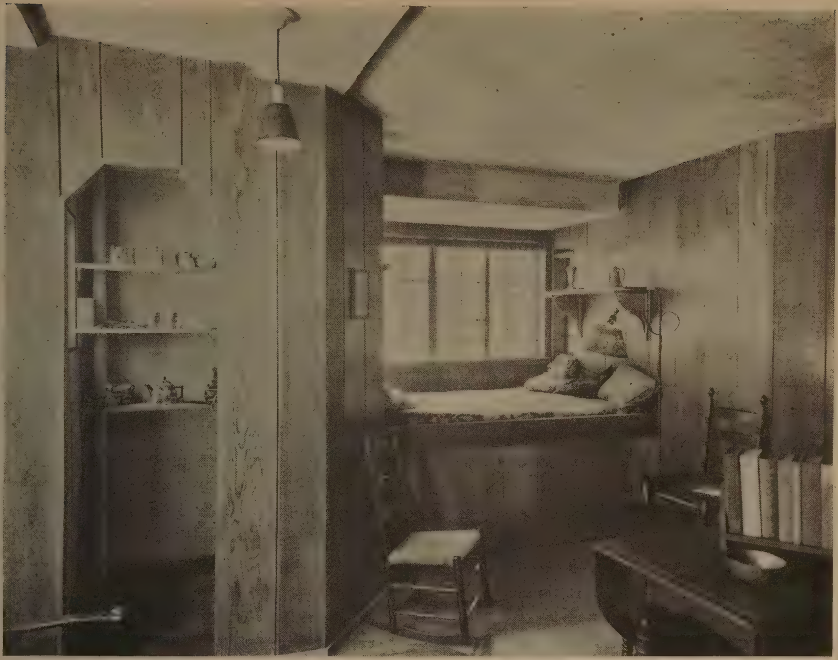
In designing "Twin Peaks" an effort has been made to provide housing suitable for the "cultural worker." The general scheme is the one-room and appurtenances apartment characteristic of San Francisco and London. Utmost utility of space is represented and such installations as a mediaeval peasant type bed, a desk and desk window, bench radiators, cedar closets, etc., are features specially designed to the needs of the busy worker and to harmonize with this unique type of building.



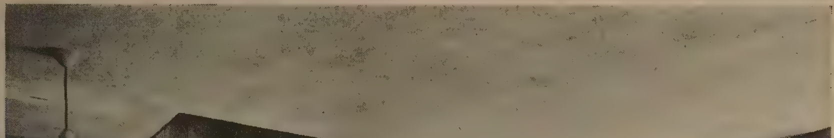
Apartment in Attic



FLOOR PLAN, "TWIN PEAKS"



First Floor Apartment



Apartment in Basement

"TWIN PEAKS," AN APARTMENT HOUSE AT 102 BEDFORD STREET, NEW YORK

The ARCHITECT'S LIBRARY

Mexican Architecture, Domestic, Civil and Ecclesiastical*

The most abundant and imposing monumental architecture in either of the American continents, earlier than the nineteenth century, is in Mexico. The greater part of all that is most interesting is the accomplishment of the two centuries following the Conquest. Except for a few massive prehistoric ruins, little remains of the Aztecs. Their work was mostly demolished and rebuilt. The architecture of the two centuries referred to was predominantly ecclesiastical, and even now, or until lately, buildings put up by the church are usually the most notable. The style of it all comes directly from Spain, and in general followed Spanish changes through the centuries. It is, curiously, more ornate than the architecture of the home country. The crowded ornament on some Mexican church façades is lavish enough to remind one of the sculpturing of Hindu temples. (See, for instance, the convent interior of Tepotzotlan, Pl. 60.)

Some of the reasons—and the chief ones—for all this are assignable enough. The English and French colonies in the north were small straggling settlements supported, so far as they were self-supporting, by hunting, farming and a little commerce; the only native population sparse, savage, of no economic value to the colonists and a considerable danger. Mexico, on the contrary, was rich, populous with enslaved or semi-enslaved Indians, who were partially civilized and thoroughly subdued, and the gold and silver from the famous mines did not all go to Spain. The conquerors, the monasteries and churches, had great estates. Sculptors and artisans were brought from Europe, and the vast population of Indians furnished the labor. Many of these, no doubt, were trained to a considerable degree of skill. Power and wealth in the hands of aristocracy and church, with unlimited labor, are conditions which tend everywhere toward a massive and ornate architecture.

The Franciscans were the first builders. Their buildings were virtually fortresses and largely Romanesque. Their churches usually rectangular with a low uplift in the ceiling, a sort of rudimentary dome, forerunner of the beautiful domes that are so characteristic of Mexico today. Afterward, following the changes in Spain, came Gothic, Renaissance, Baroque, Moorish, Mudejar (see House of the Tiles, Pl. 20 and 21), and Churrigueresque. In all these styles the masonry was very solid; the domes usually sprang from octagonal bases; the ornament generally was concentrated at salient points, and at church entrances, and was generally in modeled plaster. The contrast of concentrated ornament with plain wall surface is, of course, a Spanish feature.

Broadly speaking, then, the main impressions made on the memory by old Mexican architecture are these: heavy powerful bulk; organic structure frankly shown; rich ornament, and strong contrast of plain and decorative parts, the transition from one to the other being immediate; domes everywhere, covered with glazed tiles. The sixteenth century work is Renaissance, which became Baroque in the later sixteenth century and through the seventeenth, rather heavy, corpulent, capricious, but picturesque. In the eighteenth comes the extraordinary Churrigueresque style. Churrigueresque has been called "decorative delirium" and the Spanish architect, José Churriguera, "the heresiarch of bad taste." It is the extreme of decorative unrestraint (see the Church of Santissima, Pl. 16, Casa de Alfeñique, Pl. 127, Church of Santa Rosa and Santa Clara, Pl. 113). The craze for Churrigueresque was

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*Mexican Architecture, Domestic, Civil and Ecclesiastical. By Atlee B. Ayres. 426 pp. illus.; folio. Helburn. $25.

Illustration from *Mexican Architecture, Domestic, Civil and Ecclesiastical*

followed, in the nineteenth century, by a rage for its extermination, which produced a melancholy nakedness of devastated surfaces. Bad Graeco-Roman work replaced the old magnificence. Modern students of the remains of old Mexican Churrigueresque tend to differ from older critics on the subject. It was florid, magnificent.

Mexico runs from a hot jungle country along the coast to a dry desert toward the north. The south central portion, however, is high, mountainous, with broad fertile valleys, and a climate remarkably even and temperate by reason of the latitude and the height. Building stone and timber are available; tile, brick and adobe brick are extensively manufactured. Tile roofs, however, are not common. Most of the house roofs are flat platforms, two or three feet thick, of timber, brick and dirt filling, with a heavy coat of mortar on top.

Mexico is a picturesque country and full of color. Nearly every church has a dome covered with tile of a golden yellow, varied with white and dark blue. Some rural churches are faced with red volcanic rock rubbed with red pigment, and having tiles inserted at intersections. (See Church at Acatepec, Pl. 120.) Buildings constructed of adobe are plastered and then often a finish in varied colors of water paint is given.

Domestic architecture, especially in cities, has the familiar Mediterranean features of iron grilled windows on the street level, and the patio or court inside with its fountains and flowers, balconies, and tiled or brick floors. Earthquakes have caused one peculiarity—the use of canvas, instead of plaster, for ceilings; the canvas stretched so tightly that it looks like plaster.

What there may be from Spanish or Mexican presses on the subject I do not know, but the chief work in this country on Mexican architecture is Sylvester Baxter's "Spanish Colonial Architecture in Mexico," with plans by the late Bertram Goodhue. It was published in ten volumes—and again in twelve—by J. B. Millet & Co., Boston. It is very expensive and probably now difficult to procure. Mr. Ayres' volume will be very useful in architects' libraries. It is possible, however, that the unprofessional student of the subject will regret the lack of a detailed commentary.

But whoever is unacquainted with the subject is sure of a surprise and liable to a thrill. One seems to have heard a great deal about the California missions, which, after all, were few, poor, far away in the wilderness, and their building period quite recent.

Illustration from *Mexican Architecture, Domestic, Civil and Ecclesiastical*

Illustration from *Mexican Architecture, Domestic, Civil and Ecclesiastical*

It is a small subject, whereas the old architecture of Mexico is a great subject. The bulk of it is not in Mexico City, but scattered in smaller cities, towns and haciendas from one end of the country to the other. Some of it is even across the border in Texas. It is the study of this architecture which may enable one best to realize the Conquistadores and their successors, and the mighty grip of the church on that old society; to realize that Mexico was, and perhaps is still, one of the richest countries of the world in metals and precious stones; that where wealthy planters to the north counted their slaves by scores and the land in acres, the lords of the earth in Mexico counted their peons by thousands and their land in square miles.

Arthur W. Colton

The Smaller English Houses of the Later Renaissance*

The earlier works on English architecture stopped, for the most part, at a deadline about 1760. Even in Sir Reginald Blomfield's history the Adams and their contemporaries were set down as belonging to a decadence. Recent writers have undertaken a rescue, and have shown for the first time the work of the late eighteenth and early nineteenth centuries. The first of them was Professor Richardson, of University College in London, in his "Monumental Classic Architecture in Great Britain and Ireland." This was followed by Swarbrick's "Adam" and Bolton's "Adam" and "Soane," and by the two volumes of Stanley Ramsay's "Small Houses of the Late Georgian Period." Now come Richardson and Harold Eberlein with "The Smaller English Houses of the Later Renaissance" (Batsford and Helburn), a well-printed quarto with some two hundred and fifty photographs, plans, diagrams of compositional schemes, and plates of detail.

Although the book begins with the Restoration, its emphasis is all on the period around 1800. It shows many unfamiliar houses with interesting compositions of mass, such as St. Paul's, Waldenbury and Moggerhanger, Bedfordshire; or, on a smaller scale, Lavenham, Suffolk, and Kent Grange, Hampstead. A large place is given to the work of Henry Holland, whose reputation has been obscured between those of Adam and Soane and of John Nash. Holland's buildings include Southill in Bedfordshire and Wimbledon house. These have symmetrical dispositions of wings and loggias, with refined and simple treatment of stucco wall surface. A brick house of his, admirable in proportion and restraint, is Avenue House, Ampthill, the doorway of which worthily forms the frontispiece of the volume. Another little known designer represented is Robert Mylne, whose plans have varied and interesting spatial effects.

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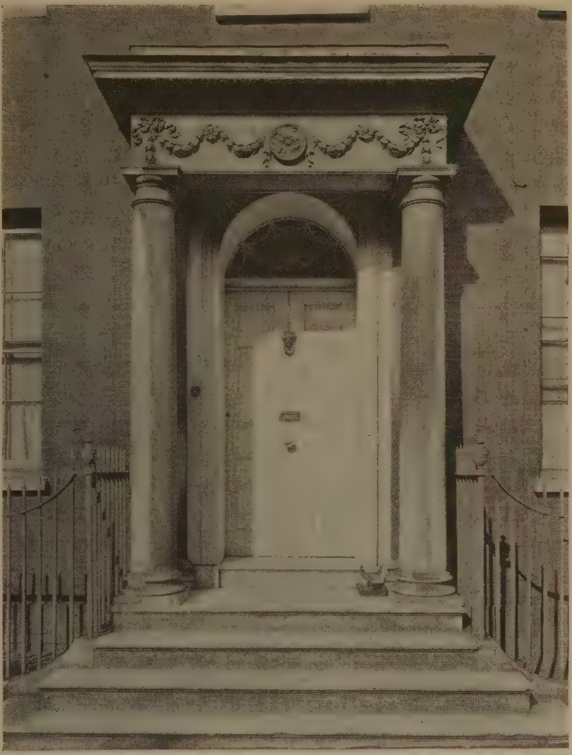
*The Smaller English Houses of the Later Renaissance. By Richardson & Eberlein. Helburn, $10.


From *Smaller English Houses of the Later Renaissance*

The publication of the minor Georgian houses has made possible interesting comparisons between English and American work of the time. Certain types, such as the one represented by Rainham Hall and Egginton Manor, with their segmental window-heads and brick parapets, are characteristically and solely English. The more frequent survival of Elizabethan features like the bay-window and the mullioned window also marks the minor English Georgian. On the other hand, the old Warden Rectory in Bedfordshire is closely similar to such American houses as Kenmore and Woodlawn. Chessel House near Southampton, now demolished, is paralleled by Thornton's Tudor Place in Georgetown. The weather-boarded, or, as we should say, clapboarded houses of Essex and Kent, already made familiar by Ramsay, are illustrated in further examples which reiterate that the wooden Colonial was not specifically and exclusively American.

The local varieties of the early cottages preserving a mediaeval character have been well illustrated in a whole series of English books. For the Georgian work, the study of these varieties has been only begun, in such works as Richardson and Gill's "Regional Architecture of the West of England," which is amplified in certain directions by the volume before us. Let us hope to see it carried still further.

Fiske Kimball.

Cathedrals, Abbeys and Shrines of History and Romance in the British Isles. By W. H. Walton, F.L.A., New York: London, Midland & Scottish Rly. Co. (200 Fifth Ave.) 1926. 1st ed. ix. 184 pp. Ill. Maps. 5¾ x 9⅛ in. Cloth. $1.00.

A guide to these landmarks in the British Isles. "While the greater churches of our land may have a few superiors in immensity and logical construction in the leading continental cities, nowhere can that combination of charming structure and exquisite setting, which is the general character of the unobtrusive rural churches and ruined abbeys of Britain, be found so effective outside these islands."

Architecture. By Lewis Mumford. Series Reading with a Purpose. Chicago: American Library Association. 1926. 1st ed. 34 pp. 4¾ x 6⅞ in. Paper. 35c.

The Scenewright. By André Smith. New York: The Macmillan Co., 1926. 1st ed. vii. 135 pp. Ill. 5 x 7¼ in. Cloth. $2.00.

Instructions on the making of stage models and settings, and how such material is utilized in the construction of the finished stage settings. The methods advocated, the author states, so reduces the cost of construction as to make a new set possible for every play.

The Cathedrals and Churches of Italy. By T. Francis Bumpus. New York: Dodd, Mead & Co., 1926. 1st ed. viii. 400 pp. Ill. (part colored.) 6¼ x 10¼ in. Cloth. $7.50.

Detailed architectural and historical descriptions, accompanied by seventy-nine illustrations, eight of which are in color. Mr. Bumpus will be remembered as the author of "The Cathedrals of England & Wales" and other similar work.

Some Lesser Known Architecture of London. By James Burford, A.R.I.B.A., and J. D. M. Harvey, B.A. New York: William Helburn, Inc. 1926. 1st ed. 23 pp. LXX plates. 7⅜ x 10 in. Bound in Boards. $6.00.

Ecclesiastical buildings have been excluded and, the authors say, "Since the later Georgian architecture has been so adequately dealt with in recent publications we have restricted our choice, for the most part, to the work of earlier days."

The Lightning Graphs. By I. S. Dalgleish, A.M.I.E.E. London, England: Crosby Lockwood & Son. 1926. 1st ed. 30 pp. Drawings. 9 x 7⅞ x 7⅜ in. Cloth. 5/- net.

A means of solving by graphs some of the constantly recurring equations which cannot be solved by an unbroken series of operations on a standard slide rule. Prepared for the use of engineers, physicists, architects, draughtsmen, surveyors, etc.

Art Studies, Medieval Renaissance and Modern. Vol. 4. Edited by Members of the Departments of the Fine Arts at Harvard and Princeton Universities. Cambridge: Harvard University Press. 1926. 1st ed. 153 pp. Ill. (plates). 8⅜ x 12 in. Bound in Boards. Price $7.50.

Interior Decoration for the Small Home. By Amy L. Rolfe. New York: The Macmillan Co., 1926. Revised 2nd ed. xviii. 169 pp. Ill. 5 x 7⅝ in. Buck. $2.00.

In this edition, price quoting has been eliminated and comparative values given instead. The text has also been revised and expanded to include the new ideas in interior decoration which have come into use during the past decade.

How to Read Blueprints. By William S. Lowndes, Ph.B., A.I.A. Philadelphia, Pa. David McKay Co., 1926. 2nd. ed. vii. 164 pp. Ill. Diagrams. 5¾ x 8⅝ in. Cloth, $2.00.

The vital difference between the building trade mechanic and the foreman is the latter's ability to read and understand blueprints. This book is intended to bridge the dividing line and make it possible for the mechanic to read and interpret blueprints for himself instead of getting his instructions at second hand.

A.S.T.M. Standards adopted in 1926. Philadelphia, Pa. American Society for Testing Materials. 1926. 1st ed. 102 pp. Ill. 6 x 9 in. Paper. $1.50.

Twenty-three revised or newly adopted standards of the Society. The Second Supplement to the 1924 issue of the triennial Book of Standards.

Handbook of Domestic Oil Burning. New York: American Oil Burning Association. 1926. Tentative edition. 224 pp. Ill. 4¾ x 7¼ in. Boards. $2.75.

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